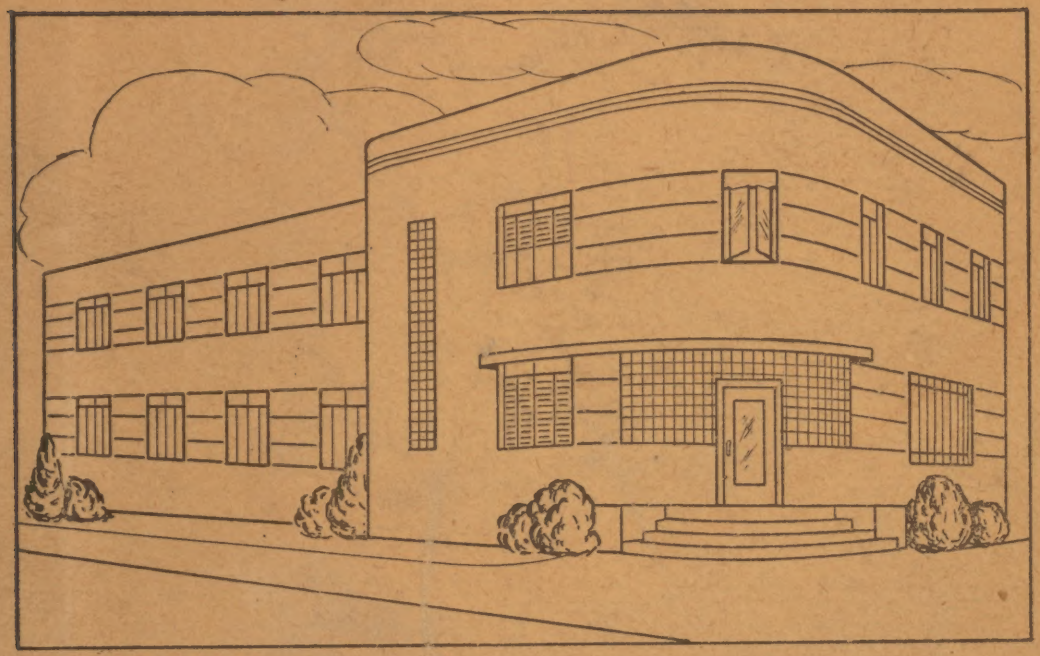
HEALTH AND MEDICAL CARE
in
ALABAMA



ALABAMA STATE PLANNING BOARD
IN COOPERATION WITH THE
POSTWAR PLANNING COMMISSION
OF THE
MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
AND THE
ALABAMA DEPARTMENT OF HEALTH
MAY 1945

HEALTH AND MEDICAL CARE IN ALABAMA

AN INVENTORY OF CONDITIONS
AND A
PROPOSED HOSPITAL PLAN

ALABAMA STATE PLANNING BOARD

IN
COOPERATION
WITH
THE

POSTWAR PLANNING COMMISSION
OF THE
MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
AND THE

ALABAMA DEPARTMENT OF HEALTH

May, 1945

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FOREWORD

Resource conservation and wise utilization of resources are widely acclaimed and accepted as constituting an essential policy which should be followed on the local, state, regional, and national levels. Much public and private money is spent, and properly so, in an effort to halt the inroads of soil erosion, and after halting this insidious force, to gain ground in this fight. Where there is soil erosion, human erosion is also to be found.

People, the people of Alabama, are our most fundamental and precious resource. No man can reach or enjoy a high level of economic or cultural attainment without a healthy mind in a healthy body.

In this report the staff of the Alabama State Planning Board, in cooperation with the State Department of Health, has attempted to present pertinent facts dealing with the health conditions, the medical care received, the deficiencies and the needs of the people of Alabama. The report recommends a master hospital plan, and we believe that steps taken to achieve this plan will be effective in helping to break the vicious circle of poor health contributing to low income and low income contributing to poor health. This circle must be assaulted, not from one direction but from many directions, and each force directed against the enemy strong point will be reinforced by every other assaulting force. A start needs to be made now. In the master hospital plan one proposed part of an overall strategy may be examined and, if found good, then the action called for by this part of the strategy to stop human erosion and to raise the productive level of the people of Alabama may be directed against the barriers.

W. O. DOBBINS, Jr., Director
Alabama State Planning Board

May 15, 1945

B. F. AUSTIN, M.D., Health Officer
Alabama Department of Health

ACKNOWLEDGEMENTS

On September 1, 1944, Dr. B. F. Austin, State Health Officer, wrote to Mr. W. O. Dobbins, Jr., Director of the Alabama State Planning Board, requesting that the Planning Board join forces with the State Department of Health and the Medical Association of the State of Alabama through its Postwar Planning Commission in a study of health and medical care. The Planning Board indicated its willingness to join forces and a working committee was appointed consisting of Dr. B. F. Austin and Dr. Douglas L. Cannon representing the Medical Association, Dr. D. G. Gill representing the Department of Health, Dr. John Newdorp representing the Farm Security Administration, Mr. C. L. Sibley representing the Alabama Hospital Association, Miss Pearl Barclay representing the Alabama Nurses Association, Mr. E. W. Gibbs representing the Alabama Pharmaceutical Association, Miss Elizabeth Bryan representing the Alabama Department of Public Welfare, Dr. W. E. Goodwin representing the Alabama Dental Association, and Mr. Gilbert A. Sanford representing the Alabama State Planning Board. This working committee met several times and the members brought in reports in their respective fields; a considerable portion of these reports has been incorporated into this study. We gratefully acknowledge this assistance.

Especial recognition and thanks are due Dr. John Newdorp for his splendid cooperation in preparing two of the chapters and in assisting in the preparation of the master hospital plan. His knowledge of Alabama's hospitals and of the problems involved in a hospital construction program were invaluable.

Mr. Gilbert A. Sanford acted as secretary to the working committee and brought together the reports into a preliminary working paper. He has also written certain parts and served as editor of this report.

ALABAMA STATE PLANNING BOARD

ALABAMA DEPARTMENT OF HEALTH

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Chapter I

ALABAMA'S HEALTH

Health is a basic necessity for the well-being of any people. Without health the people fail to achieve the goals to which they aspire and which they are potentially capable of achieving. Without health, education and wealth are difficult to achieve and possibly meaningless.

The health of our people can be improved; it is largely a purchasable commodity. But the problem must not be over-simplified; it is a complex one consisting of lack of proper hospital facilities; lack of sufficient professional persons such as doctors, dentists, and nurses; lack of sufficient income to permit many people to purchase adequate medical attention; and, to a considerable degree, the ignorance of many persons. The conditions can be corrected, but every interest and every source of money must be tapped. In the long run it may be cheaper to have good health by improving health facilities than to have poor health and spend money on other things.

The health of a community can be measured to a considerable degree by various mortality rates. No one rate will tell the whole story, but a study of vital statistics in Alabama will provide a partial picture of the health situation as it now exists and the probable trend in the near future.

Mortality. Alabama's crude death rate compares favorably with that of the United States. In 1925, the first year in which Alabama was included in the death-registration area, this state had a death rate of 11.5 per thousand, as compared with 11.7 in the United States. In all but three years since that time Alabama's rate has been lower than that of the United States, and in 1940 it was 10.4 as compared to the national rate of 10.8. Throughout this period there has been a gradual downward trend although in some years the rate has increased.

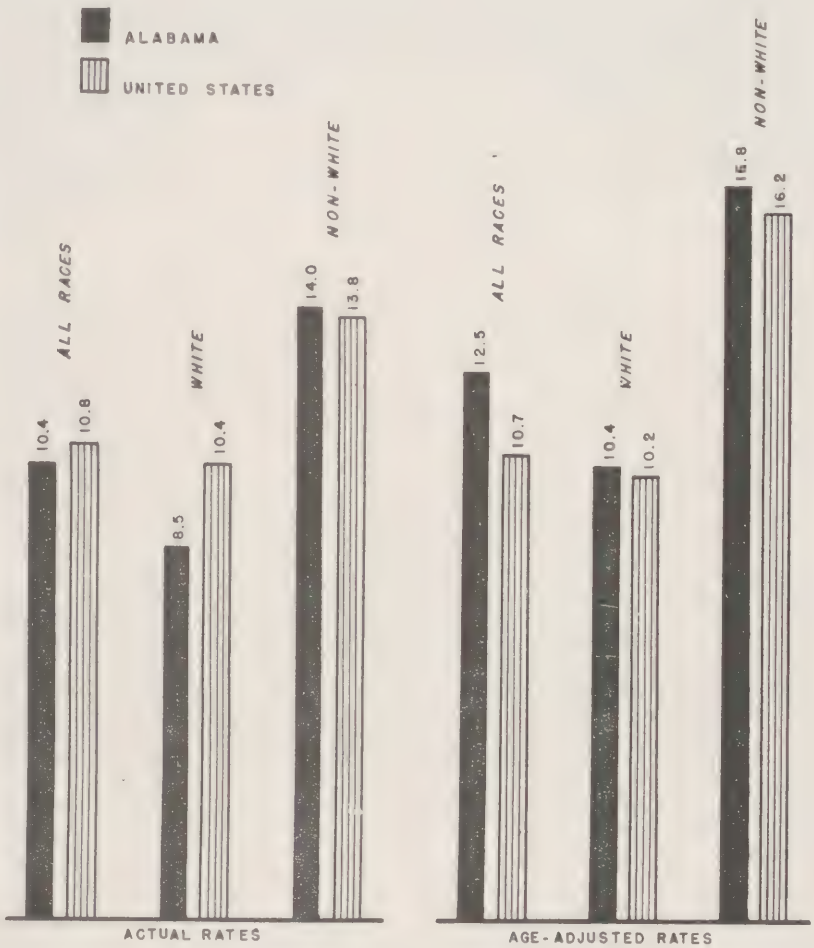
The fact that Alabama has a lower death rate than the United States should be interpreted against a background of the age distribution. Alabama has a younger average age (23.8 years), or more young

people than does the United States (29.0 years), and hence a lower death rate is to be expected. Vermont had the highest death rate in 1940 with 12.8 deaths per thousand, but its average age was 29.9 years. However, the lowest death rate in the nation was 8.2 in North Dakota, although its average age was 25.6 years which was higher than Alabama's.

Figure 1 presents the death rates, by race, for Alabama and the United States in 1940, and also presents age-adjusted rates. These latter rates have been computed on the basis of a standard age-distribution, and mean that if the age-distributions in Alabama and the United States were the same the death rates would be as indicated. Thus, Alabama's favorable death rate is a result of lower ages, and if the state contained an older population its death rate would be higher than that of the United States.

Appendix 1 presents the death rates of Alabama counties in 1932 and 1941 in order to permit comparison of counties and to give an indication of the trend within the counties. It should be noted that these death rates are crude rates and are subject to several limitations in that they take no account of differences in age distribution, or of sex or racial distribution. Probably the best index of the general health level and the quality of health services is the rate of infant mortality. Appendix 1 also presents these data for the same years. Although Alabama's rate has been declining and had reached the rate of 58.7 infant deaths per thousand live births in 1941, this rate is considerably above the national rate of 45.3. This high rate should not be explained by the large Negro population; the fact remains that in 1941 of every 10,000 babies born, 587 of them died within a year. This is a serious loss to the state, and indicates that adequate medical services have not been available for some of Alabama's population.

Causes of Death. Since Alabama's death rate is slightly lower than that of the United States, it is apparent that the rates for certain specific diseases will be lower. Heart disease kills 180.2 persons in every 100,000 in Alabama, but in the United States it kills annually 292.5 persons per 100,000. In Alabama cancer kills 65.3 persons as compared with 120.3 nationally. On the other hand, in Alabama the rates for nephritis, pneumonia, congenital malformation and infants' diseases, tuberculosis, syphilis, diarrhea, senility, puerperal causes, pellagra, and malaria are somewhat higher than in the nation as a whole.



ACTUAL & AGE-ADJUSTED MORTALITY RATES-ALL CAUSES
ALABAMA AND UNITED STATES-1940
TOTAL, WHITE, NON-WHITE
EXCLUSIVE OF STILLBIRTHS, BY PLACE OF OCCURRENCE
RATES PER 1,000 POPULATION

FIGURE 1

ALABAMA STATE PLANNING BOARD

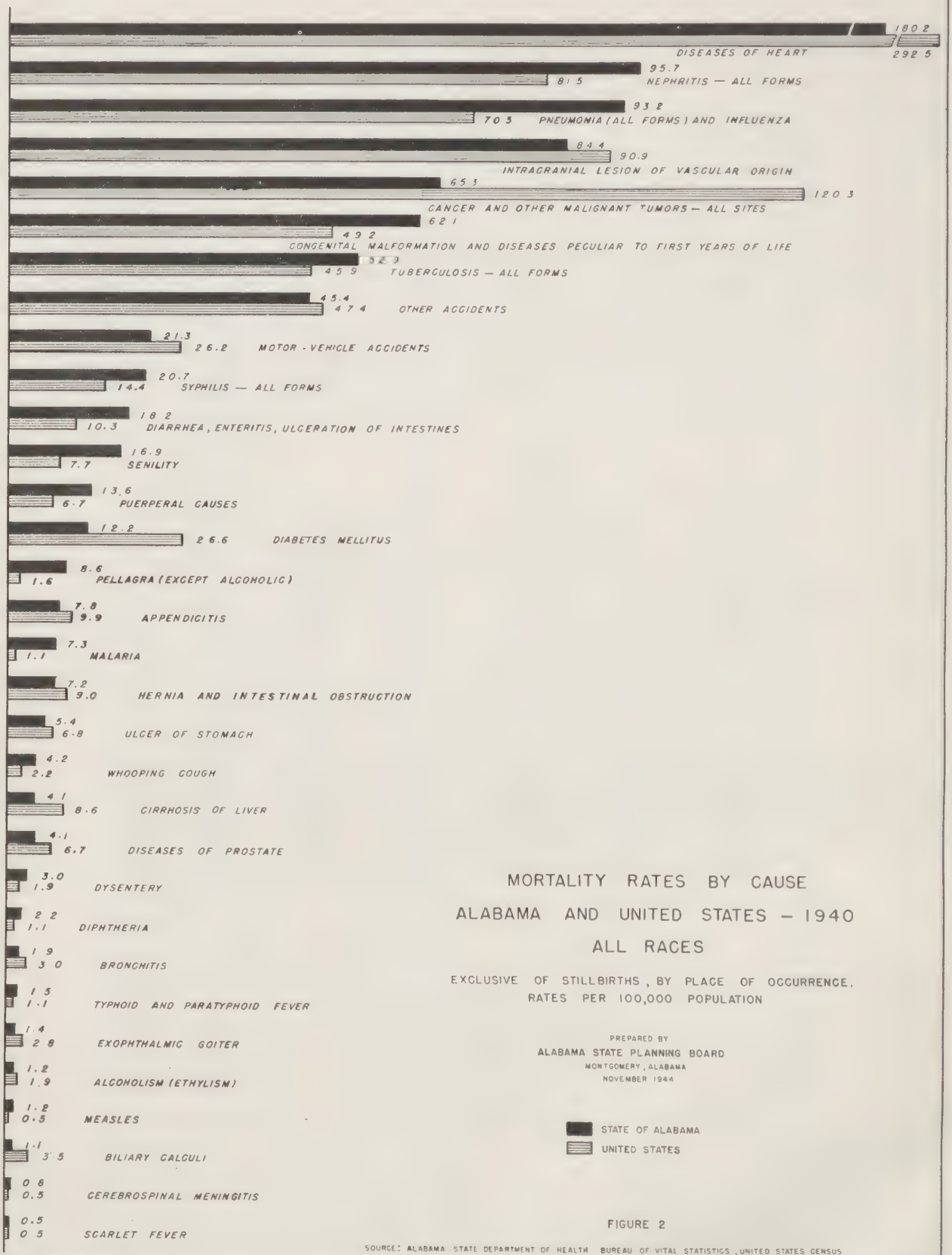


FIGURE 2

SOURCE: ALABAMA STATE DEPARTMENT OF HEALTH BUREAU OF VITAL STATISTICS, UNITED STATES CENSUS

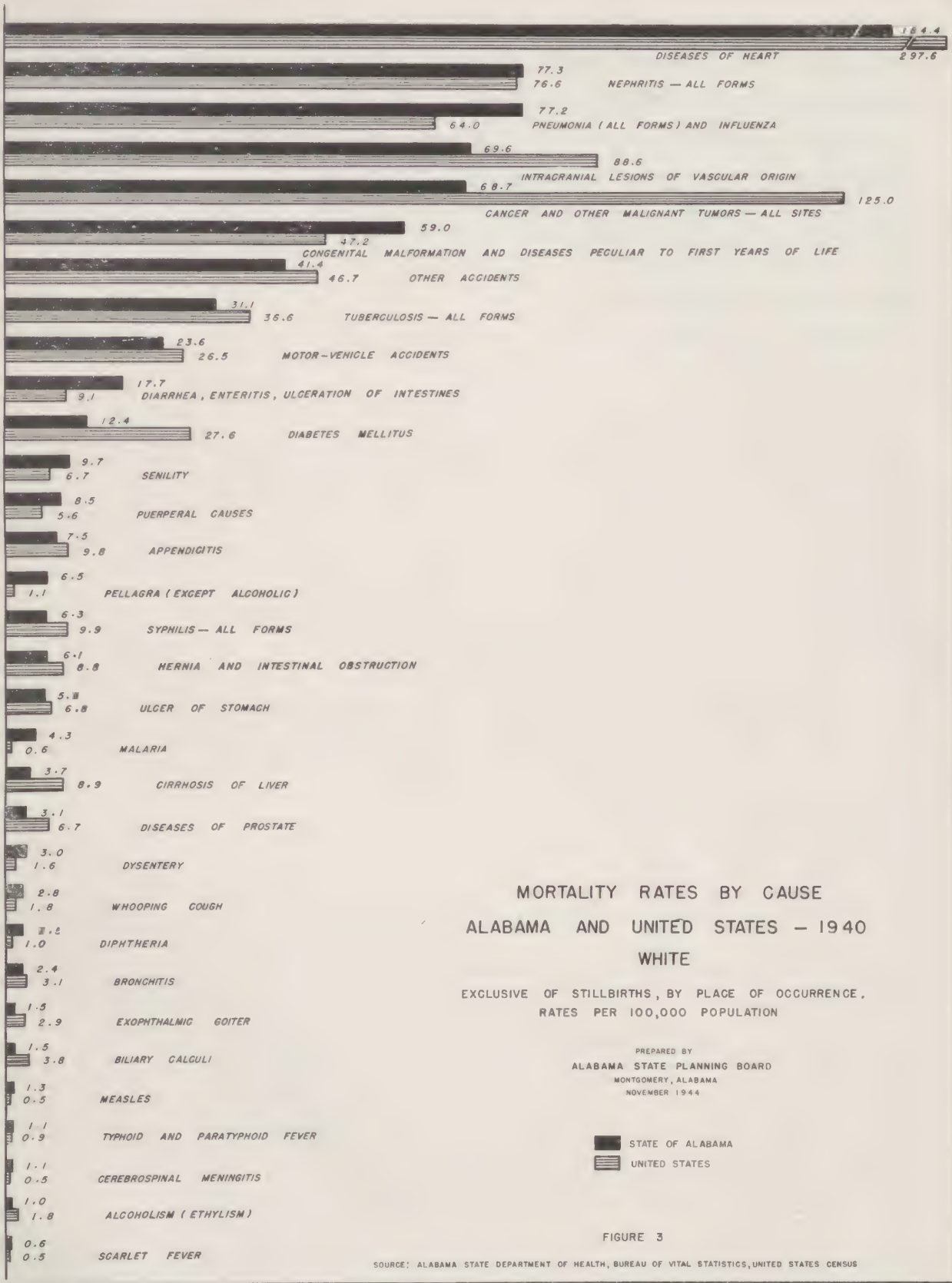
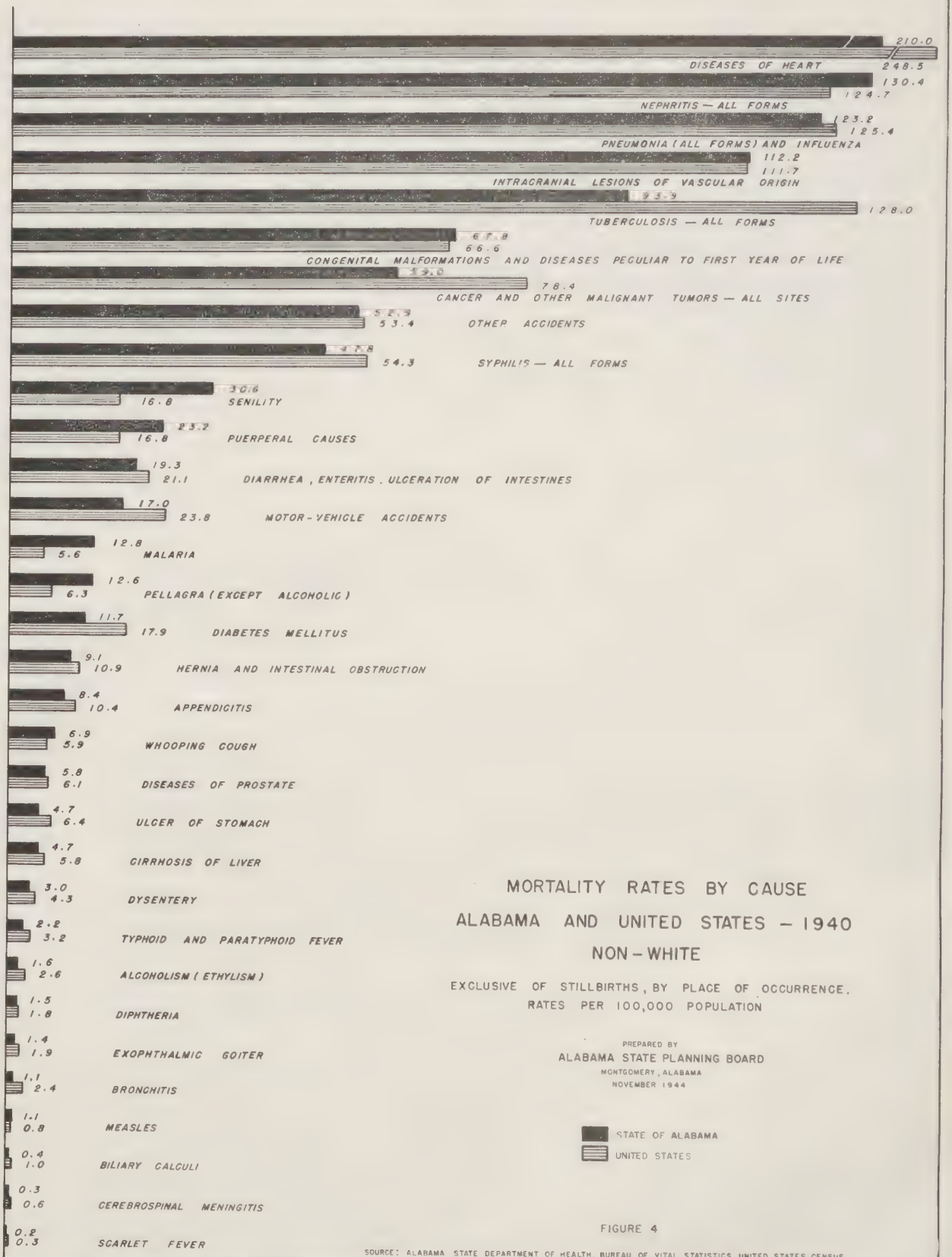


FIGURE 3

SOURCE: ALABAMA STATE DEPARTMENT OF HEALTH, BUREAU OF VITAL STATISTICS, UNITED STATES CENSUS



MORTALITY RATES BY CAUSE
ALABAMA AND UNITED STATES — 1940
NON-WHITE

EXCLUSIVE OF STILLBIRTHS, BY PLACE OF OCCURRENCE.
RATES PER 100,000 POPULATION

PREPARED BY
ALABAMA STATE PLANNING BOARD
MONTGOMERY, ALABAMA
NOVEMBER 1944

STATE OF ALABAMA
UNITED STATES

FIGURE 4

SOURCE: ALABAMA STATE DEPARTMENT OF HEALTH, BUREAU OF VITAL STATISTICS, UNITED STATES CENSUS.

Figures 2, 3, and 4 present these comparisons for the most significant causes of death. These figures are based upon the data in Appendix 2 which shows the selected causes of death in the United States and Alabama, by race. It will be noted that the over-all death rate of Negroes is considerably higher than that of whites, and obviously the Negro rate for most of the specific causes is higher. In many of these causes it is apparent that the higher rate of Negro deaths is a result of poorer economic conditions and poorer medical care rather than any innate racial condition.

In most cases the trend of the rates for specific causes has been downward in the past decade. Table 1 presents the rates for 1930 and 1940 for selected causes of death. Syphilis showed a slight increase, as did intracranial lesions of vascular origin, stomach ulcer, diabetes. A large increase occurred in cancer and heart disease. All other causes declined, and in some there were sharp decreases in the toll taken each year.

Large geographic differentials occur in the causes of death: some of these differentials are the result of the urban-rural distribution of population, others result from the racial distribution, still others may bear a direct relationship to geographic factors. Appendix 3, showing selected rates by counties for 1932 and 1941, permits geographic comparison and also indicates the trends within the counties.

Births and Medical Attention. Alabama's birth rate is high (22.2 per thousand population in 1940) as compared with the United States rate of 17.9. Its maternal mortality rate is also more than double that of the nation, and it has already been indicated that infant mortality is higher in Alabama. One reason for these higher mortality rates is the fact that the majority of babies in Alabama is not born in hospitals, and many of them are without the care of a physician at birth. (See Table 2.) The situation is even more serious when the rural-urban distribution of births is considered (see Table 3). These data underline the need for a better distribution of hospital facilities in rural areas and for better provisions for medical care for all persons regardless of income.

When all babies are delivered by physicians, preferably in hospitals, then Alabama may expect a great decrease in both infant and maternal mortality.

Table 1. Death Rates in Alabama by Selected Causes, 1930 and 1940.*
(Exclusive of stillbirths; by place of occurrence.)
(Rates per 100,000 population.)

International List Number	Cause of Death	1930	1940
	ALL CAUSES	1147.5	1042.4
1, 2	Typhoid & Paratyphoid Fever	8.0	1.5
6	Cerebrospinal Meningitis	2.0	0.8
8	Scarlet Fever	1.4	0.5
9	Whooping Cough	9.5	4.2
10	Diphtheria	7.5	2.2
13-22	Tuberculosis — All Forms	85.7	52.9
27	Dysentery	3.6	3.0
28	Malaria	12.3	7.3
30	Syphilis — All Forms	20.2	20.7
35	Measles	3.2	1.2
45-55	Cancer & Other Malignant Tumors—All Sites	53.7	65.3
61	Diabetes Mellitus	9.1	12.2
63-b	Exophthalmic Goiter	1.4	1.4
69	Pellagra (Except Alcoholic)	24.0	8.6
77	Alcoholism (Ethylism)	1.9	1.2
83	Intracranial Lesions of Vascular Origin	76.2	84.4
90-95	Diseases of Heart	139.9	180.2
106	Bronchitis	2.4	1.9
107-9, 33	Pneumonia (All Forms) & Influenza	121.0	93.2
117	Ulcer of Stomach	4.5	5.4
119-120	Diarrhea, Enteritis, Ulceration of Intestines	39.6	18.2
121	Appendicitis	11.8	7.8
122	Hernia & Intestinal Obstruction	9.0	7.2
124	Cirrhosis of Liver	4.3	4.1
126	Biliary Calculi	1.6	1.1
130- 32	Nephritis — All Forms	96.9	95.7
137	Diseases of Prostate	5.1	4.1
140-150	Puerperal Causes	21.8	13.6
157-161	Congenital Malformations & Diseases Peculiar to First Year of Life	75.7	62.1
162	Senility	19.6	16.9
170	Motor-vehicle Accidents	18.6	21.3
169, 171-195	Other Accidents	50.9	45.4

*U. S. Bureau of the Census, **Vital Statistics Rates in the United States, 1900-1940,** Table 20.

Table 2. Live Births, by Person in Attendance, by Race, Alabama and the United States, 1942*

Person in Attendance	Alabama				United States			
	White		Negro		White		Negro	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
ALL BIRTHS	45,222	100.0	25,914	100.0	2,486,934	100.0	322,062	100.0
Physician in hospital	18,241	40.3	2,979	11.5	1,808,121	72.7	98,712	30.6
Physician, not in hospital	23,797	52.6	6,251	24.1	616,503	24.8	77,418	24.0
Midwife	2,728	6.0	15,783	60.9	54,470	2.2	141,591	44.0
Other, and not specified	456	1.0	901	3.5	7,840	0.3	4,341	1.4

*U. S. Bureau of the Census, **Vital Statistics—Special Reports**, "Live Births by Person in Attendance, United States, 1942," Volume 19, Number 8, March 24, 1944.

Table 3. Live Births, by Person in Attendance, Urban and Rural, Alabama and the United Stites, 1942.[1]

Person in Attendance	Alabama				United States			
	Urban		Rural		Urban		Rural	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
ALL BIRTHS	24,573	100.0	46,563	100.0	1,638,192	100.0	1,170,804	100.0
Physician in hospital	13,901	56.6	7,319	15.7	1,381,852	84.4	524,981	44.8
Physician, not in hospital	7,095	28.9	22,953	49.3	214,475	13.1	479,446	41.0
Midwife	3,245	13.2	15,266	32.8	39,292	2.4	156,769	13.4
Other, and not specified	332	1.4	1,025	2.2	2,573	0.2	9,608	0.8

*U. S. Bureau of the Census, **Vital Statistics—Special Reports,** "Live Births by Person in Attendance, United States, 1942," Volume 19, Number 8, March 24, 1944.

Conclusion. Alabama's health is not an alarming problem, but it is far from ideal. Many diseases take a greater annual toll in Alabama than nationally and far more than in many other states. No disease is inherent in our people; the death rates often can be lowered, as proved by the trends of many diseases.

The mortality statistics presented above fail to reveal the enormous toll in money, human suffering, and lowered efficiency exacted by those various diseases which often do not kill. Malaria is common in the South, and every year levies its tax on the energy and well-being of the population. Fortunately, it is a disease which can be controlled, and which is gradually being decreased. Hookworm is another disease which debilitates but rarely kills, and is one which needs further study and attention aimed at greater control. Pellagra, prevalent in the South, is a dietary deficiency disease, and is therefore one which could be eradicated. It is intimately related to both income and education, and only through improving income and through provision of dietary information can this disease be wiped out. Venereal disease is being attacked through the compulsory testing and free treatment program, and with proper public support these diseases should be significantly lowered in the next decade. These are only a few of the more outstanding examples of debilitating diseases; obviously there are others. The provision of more hospital beds and the probable increase in doctors will exert their influence upon these diseases.

Later chapters will portray the lack of adequate medical and hospital attention received by a large part of the population. By improving this condition a long step will have been taken toward better health in Alabama.

Chapter II

PHYSICIANS IN ALABAMA

It is futile to hope that any program for improving the health of the citizens of Alabama can be successful unless the state has an adequate number of well qualified physicians. It is, therefore, necessary to study the supply and distribution of physicians and the factors which are responsible for determining the location of physicians. From these data it should be possible to draw certain conclusions regarding the steps necessary to improve the situation.

Despite the increasing population of the state, the number of physicians in Alabama has declined steadily. Population has increased from 2,138,093 in 1910 to 2,832,961 in 1940, but the number of physicians has decreased from 2,242 in 1910 to 1,878 in 1940. (See Table 4 and Figure 5.)

Table 4. Population of Alabama and Supply of Physicians, 1910-1940.

Year	Population	Physicians	Physician-Population Ratio	Physicians per 100,000 Population
1910	2,138,093	2,242	1: 954	105
1920	2,348,174	2,217	1:1,059	94
1930	2,646,248	2,088	1:1,267	79
1940	2,832,961	1,878	1:1,508	66

It is considered essential that there be one physician per thousand population if adequate medical care is to be provided. Actually the national average has been better than this for many decades and in several eastern states the number of physicians per 100,000 population is more than twice as high as the number in Alabama. It is obvious that for more than twenty years preceding 1940 there has not been a sufficient number of physicians in Alabama to provide adequate medical care. In 1940, 955 additional physicians were needed to bring the level up to one physician per thousand population.

It is commonly assumed that physicians are leaving rural counties and are concentrating in urban areas. While there is no doubt that

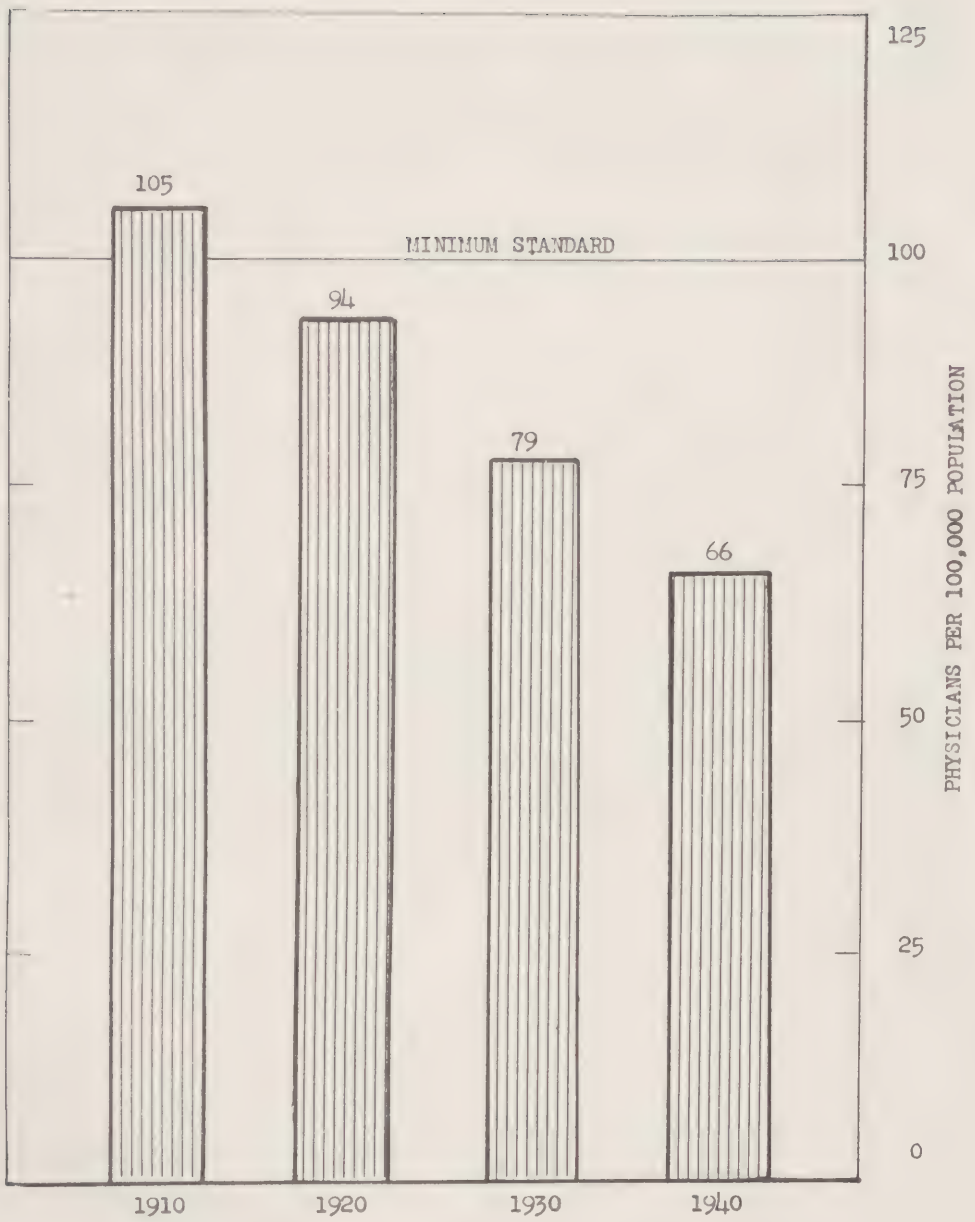


FIGURE 5. PHYSICIANS IN RELATION TO POPULATION, ALABAMA, 1910-1940.

rural areas have fewer physicians than urban areas, it is of interest to note the trend in Alabama. For this purpose the counties with incorporated places of 10,000 or more people in 1940 (12 counties) are compared with those having no incorporated places of 2,500 or more in 1940 (25 counties). The results are shown in Table 5 and Figure 6.

Table 5. Supply of Physicians in Urban and Rural Counties of Alabama, 1920-1940.

Year	Physicians per 100,000 Population		Physician-Population Ratio	
	Counties With Cities of 10,000 or More*	Counties Without Incorporated Places*	Counties With Cities of 10,000 or More*	Counties Without Incorporated Places*
1920	122	82	1: 823	1:1,214
1930	99	68	1:1,013	1:1,540
1940	69	49	1:1,454	1:2,040

*As of 1940.

From these data it can be seen that there was not an adequate number of physicians in rural areas in 1920 and that by 1940 the number was less than half of the minimum standard of one physician per 1,000 population. It is likewise evident that in counties in which were located cities of 10,000 or more people in 1940 there has also been a decline in the number of physicians so that by 1940 there was but one physician per 1,454 population. This is contrary to the generally expressed belief that urban areas have had an adequate and increasing number of physicians. Actually, the physician-population ratio in the populous counties of Alabama was below the minimum standard in 1930 and considerably below by 1940. This decline is evident even in Jefferson, Mobile, and Montgomery Counties. (See Table 6.)

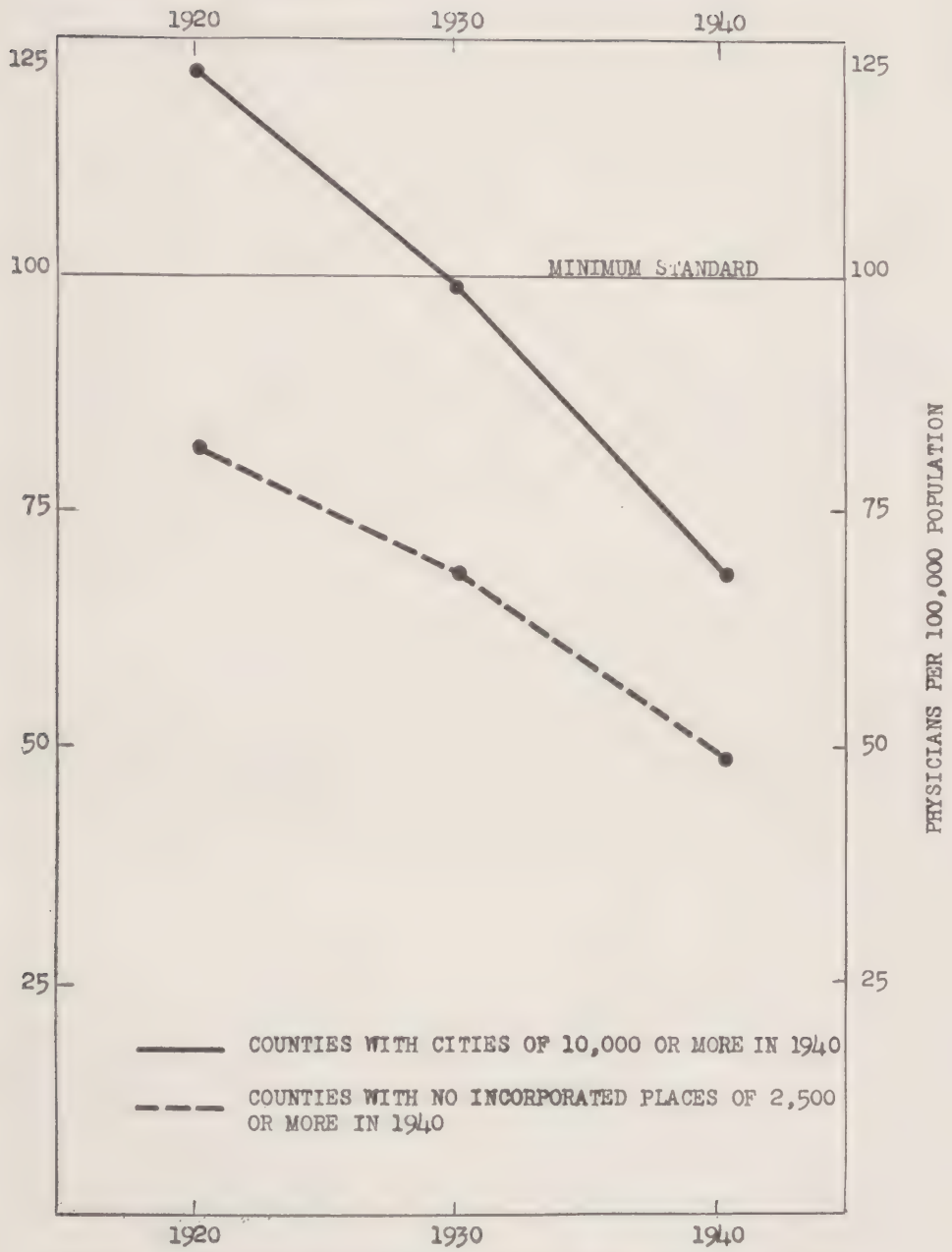


FIGURE 6. PHYSICIANS IN ALABAMA, RURAL AND URBAN, 1920 - 1940.

Table 6. Physicians in Jefferson, Mobile, and Montgomery Counties.

Year	Physicians per 100,000 Population	Physician-Population Ratio
1920	144	1: 696
1930	111	1: 905
1940	98	1:1,019

Note that in these three urban counties the number of physicians fell below the minimum of adequacy by 1940 despite the fact that most of the specialists in the state were concentrated there and these centers would be expected to draw patients from surrounding counties as well as from their own population groups.

Although the decline in rural areas is alarming enough, the figures presented do not take into account another significant factor. Communities with equal numbers of physicians do not necessarily have the same facilities for medical care. Many physicians, although still active, have reached so advanced an age that their service capacity is greatly reduced. The reduction in number of physicians in Alabama is caused by the death of older physicians and the lack of their replacement by young physicians. This is demonstrated by the fact that in 1940 and 1941 Alabama with about two percent of the national population received only one-third of one percent of newly licensed physicians, whereas the state of New York with 10 percent of the population received 18 percent of newly licensed physicians.[1] (See Figure 7.)

For this reason physicians in Alabama, and particularly in the rural sections, were on the average considerably older in 1940 than in 1920 and as a consequence were capable of providing less service. An indication of the variation of service at different ages can be expressed in a curve. Such a curve has been developed on the basis of the relative number of patients seen in a week in 1942 by active physicians of different ages engaged in private practice.[2] (See Figure 8.) This curve

[1]Perrott, G. St. J. and Davis, B. M.: "The War and the Distribution of Physicians," **Public Health Reports**, 58:1,545 (October 15, 1943.)

[2]Pennell, E. H.: "Location and Movement of Physician—Methods for Estimating Physician Resources," **Public Health Reports**, 59:281, (March 3, 1944).

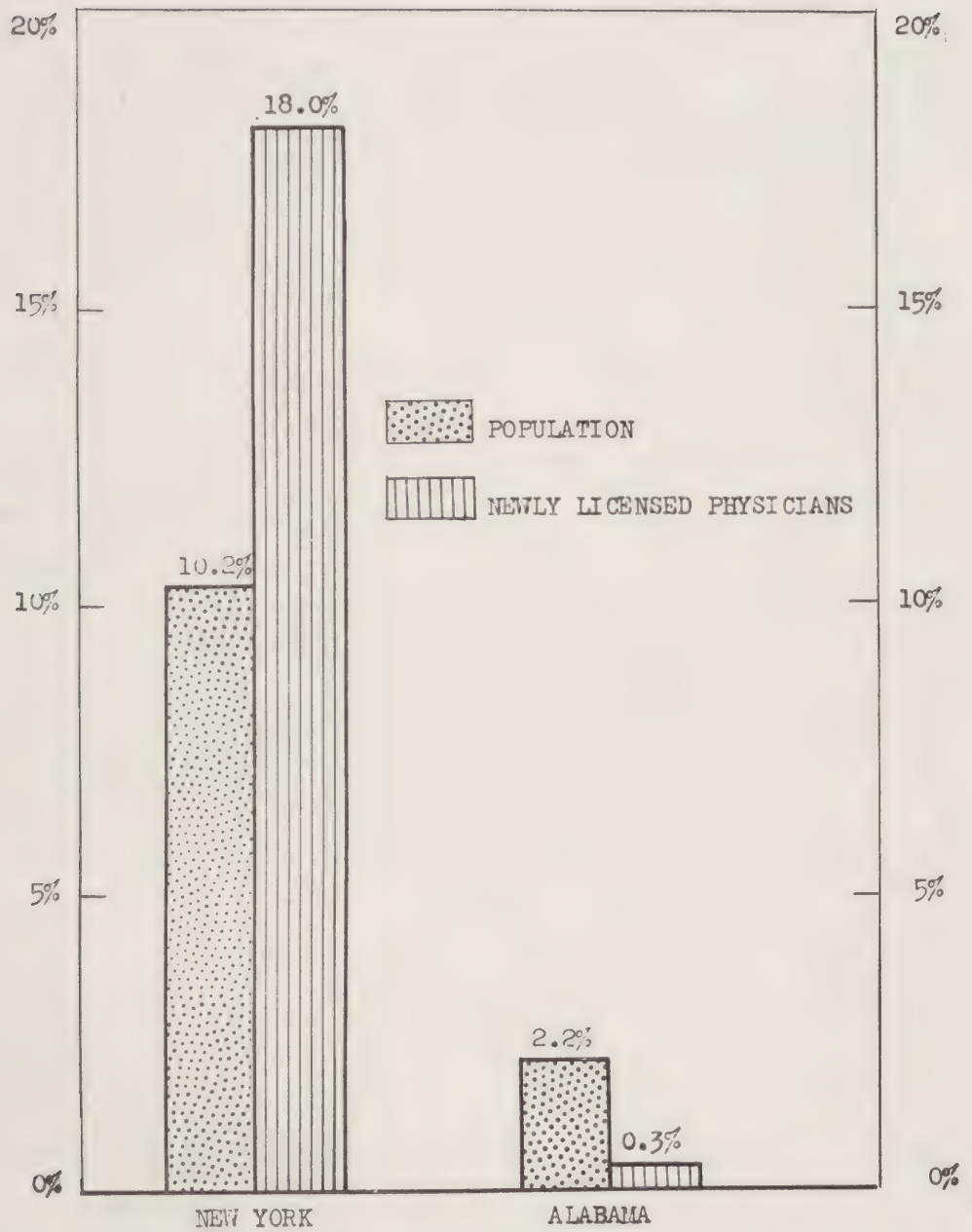


FIGURE 7. LOCATION OF NEWLY LICENSED PHYSICIANS: 1940-1941.

and the tables for estimating the service capacity of physicians make it possible to attempt some estimate of the reduction in medical service caused by the aging of Alabama's physicians. As this is predominantly a rural problem, one of the 25 counties in Alabama with no incorporated place of 2,500 or more population was selected for such analysis. This county, like most rural counties, has had a steady decline in the number of physicians practicing during recent decades. The data are presented in Table 7. Note that this county is better than the average for the 25 counties, approaching very nearly the level of physician supply existing in those counties with cities of 10,000 or more population.

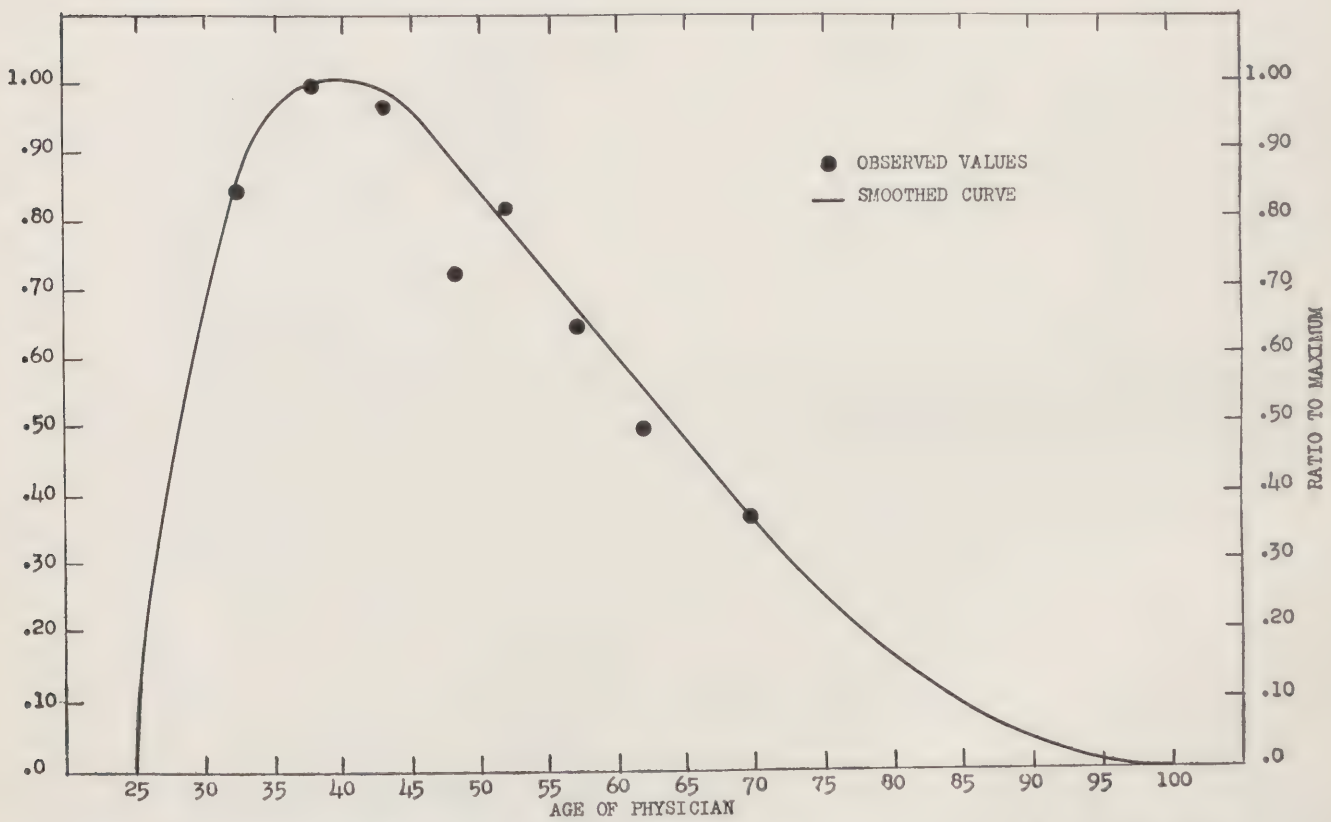


FIGURE 8. RELATIVE NUMBER OF PATIENTS SEEN IN A WEEK IN 1942 BY ACTIVE PHYSICIANS OF DIFFERENT AGES.

Table 7. Supply of Physicians in a Rural Alabama County and in Twenty-Five Rural Counties, 1920-1940.

Year	Physicians per 100,000 Population		Physician-Population Ratio	
	Selected County	Rural Counties	Selected County	Rural Counties
1920	104	82	1: 964	1:1,214
1930	87	68	1:1,154	1:1,540
1940	60	49	1:1,680	1:2,040

However, the age of physicians in this selected county has been increasing and the physicians are no longer capable of rendering as much service. By calculating the service capacity of each physician in 1920, 1930, and 1940, it is found that the capacity of service of the average physician in the county in 1930 was 80 percent of that in 1920 and by 1940 this had declined to 64 percent. When corrections are made in this way, we can estimate more accurately the decrease in medical service available in this county. This is shown in Table 8 and Figure 9. Thus it can be seen that while the physicians in this county in 1940 had been reduced to only 58 percent of those in practice in 1920, the correction on the basis of their capacity to render service indicates a reduction to 37 percent.

Table 8. Supply of Physicians in a Rural Alabama County, 1920-1940, with Corrections for Service Capacity.

Year	Physicians per 100,000 Population		Physician-Population Ratio	
	Uncorrected	Corrected on basis of Service Capacity	Uncorrected	Corrected on basis of Service Capacity
1920	104	104	1: 964	1: 964
1930	87	70	1:1,154	1:1,442
1940	60	38	1:1,680	1:2,612

Although the changes in other rural counties may vary somewhat, the general trend is the same. In other words, conditions are actually worse than revealed by data showing only physicians per 100,000 population or physician-population ratios. It is also possible to conclude that as a result of the increasing age of physicians in rural sections the situation is apt to become worse at a progressively increasing rate.

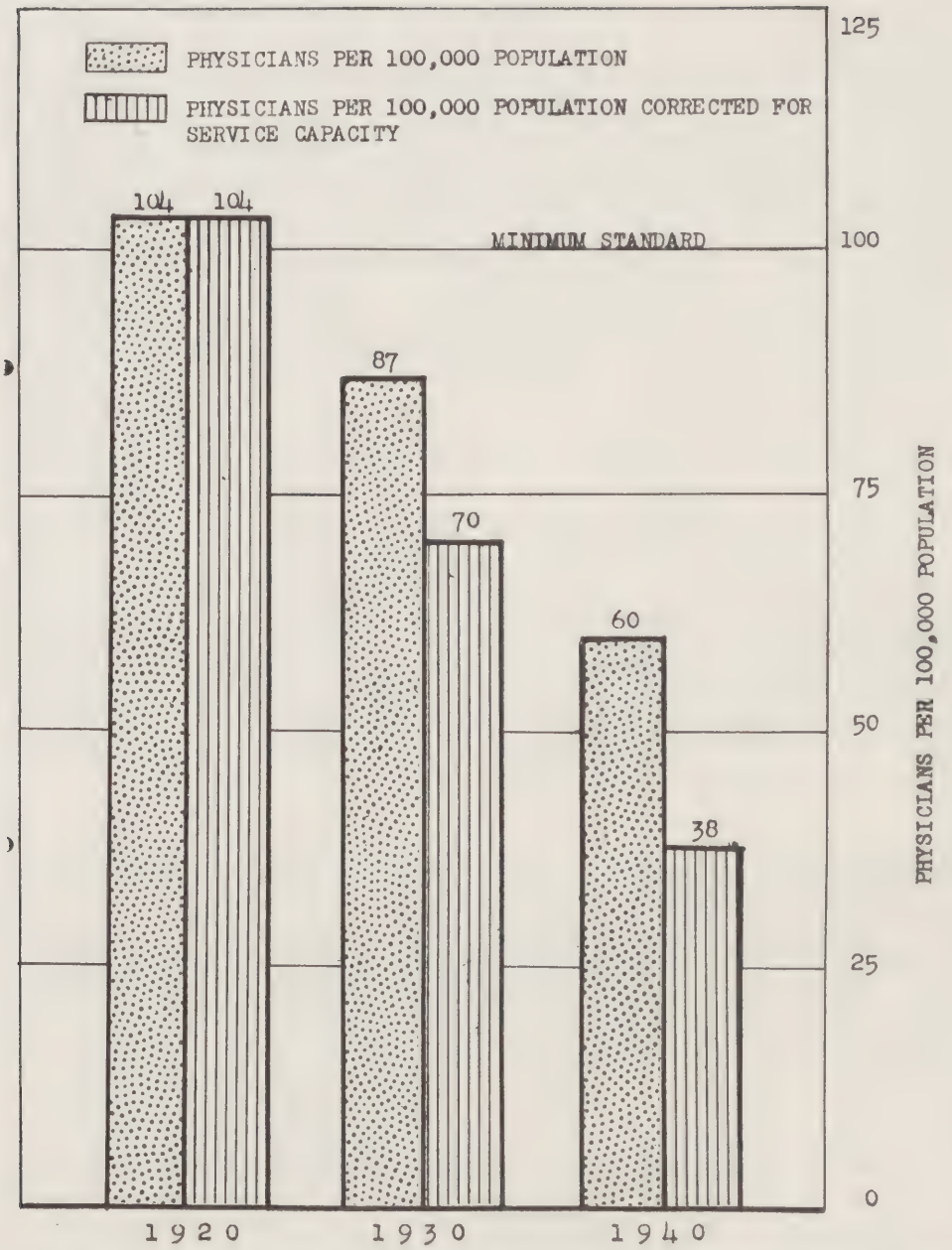


FIGURE 9. SUPPLY OF PHYSICIANS IN A RURAL ALABAMA COUNTY, 1920 - 1940.

The dislocations incident to the war have distorted the picture of physician supply to such an extent that a study of the present situation cannot be used as a basis for discerning future trends or for planning. Despite this, consideration may well be given to the current physician supply. Appendix 4 is based on data collected by the Alabama Procurement and Assignment Committee. Note that the physician-population ratio has changed from 1:1,508 in 1940 to 1:1,750 in 1944 and that 158 physicians are no longer practicing. This means an actual physician-population ratio of 1:1,948 existed. No county in the state came up to a ratio of one physician per 1,000 population and only two had a ratio better than 1:1,500. There are approximately 270 physicians in military service. If all had returned on November 15, 1944, the total number of physicians in the state would be 1,823 or 55 fewer than in 1940.

It may be concluded from this study that Alabama has an inadequate supply of physicians, that the situation has been growing worse for many years, and that, unless factors are brought into play that have been absent in the past, there is every reason to anticipate that the downward trend will continue. It is also evident that conditions in rural areas are more acute but that urban centers are likewise being adversely affected.

Specialists. The quality of care available to citizens of Alabama can be appraised to a certain extent by the availability of specialists. Although many illnesses can be handled quite adequately by the general practitioner, there are others in which the attention of a well qualified specialist may mean the difference between life and death.

The number of specialists in the United States listed by the approved examining boards in specialties in 1942 represented 10 percent of all physicians listed in the American Medical Directory. The specialists in Alabama in 1942 represented only 5.8 percent of all physicians in Alabama registered in the American Medical Directory. Fifteen such examining boards have been established, but three of these boards had not certified any Alabama physician as late as 1942.

Of the 113 specialists certified by the boards, 63 were located in Jefferson County and all but 22 were located in Jefferson, Mobile, and Montgomery Counties. In other words, these three counties with only 25 percent of the total population of the state had 80 percent of all certified specialists, while the ramaining 75 percent of the population had only 20 percent of the specialists. While it is true that specialists

must locate in areas with sufficient population to support a specialized practice, it is apparent that there is a need for a somewhat more adequate spread of specialists, particularly in such fields as surgery, internal medicine, pediatrics, and obstetrics and gynecology if the entire population is to receive a better quality of medical care than has been true in the past.

Factors Influencing the Location of Physicians. To decide on methods which may be used to increase the number of physicians in Alabama, and to provide a more equitable distribution of these physicians, it is necessary to study the factors which influence the location of physicians. A study by the United States Public Health Service[1] indicates that the most important factors influencing the location of young physicians can be stated in the order of their importance as follows:

1. The wealth of the community
2. The facilities for hospitalization of patients
3. The availability of consultants and specialists in the various fields of medicine
4. The character of the community.

1. **Wealth of the Community.** The per capita income of the population is the most important factor influencing the ratio of physicians to the population. The distribution of physicians over the entire nation in relation to effective buying income is indicated in Figures 10 and 11. From this study it is evident that in 1938 in counties with the highest per capita effective buying income the physician-population ratio was nearly four times as great as in the poorest counties; this ratio for physicians under 45 years of age was eight times as great.

2. **Facilities for Hospitalization of Patients.** The influence of the hospital in determining the location of physicians is important. The report states: "In modern medical practice the hospital is an invaluable adjunct. Such an institution affords means for the accurate diagnosis and proper treatment of illness and in many cases is essential

[1]Mountin, J. W., Pennell, E. H., and Nicolay, V.: "Location and Movement of Physicians, 1923 and 1938—Effect of Local Factors Upon Location," **Public Health Reports,** 57:1,945, (December 18, 1942).

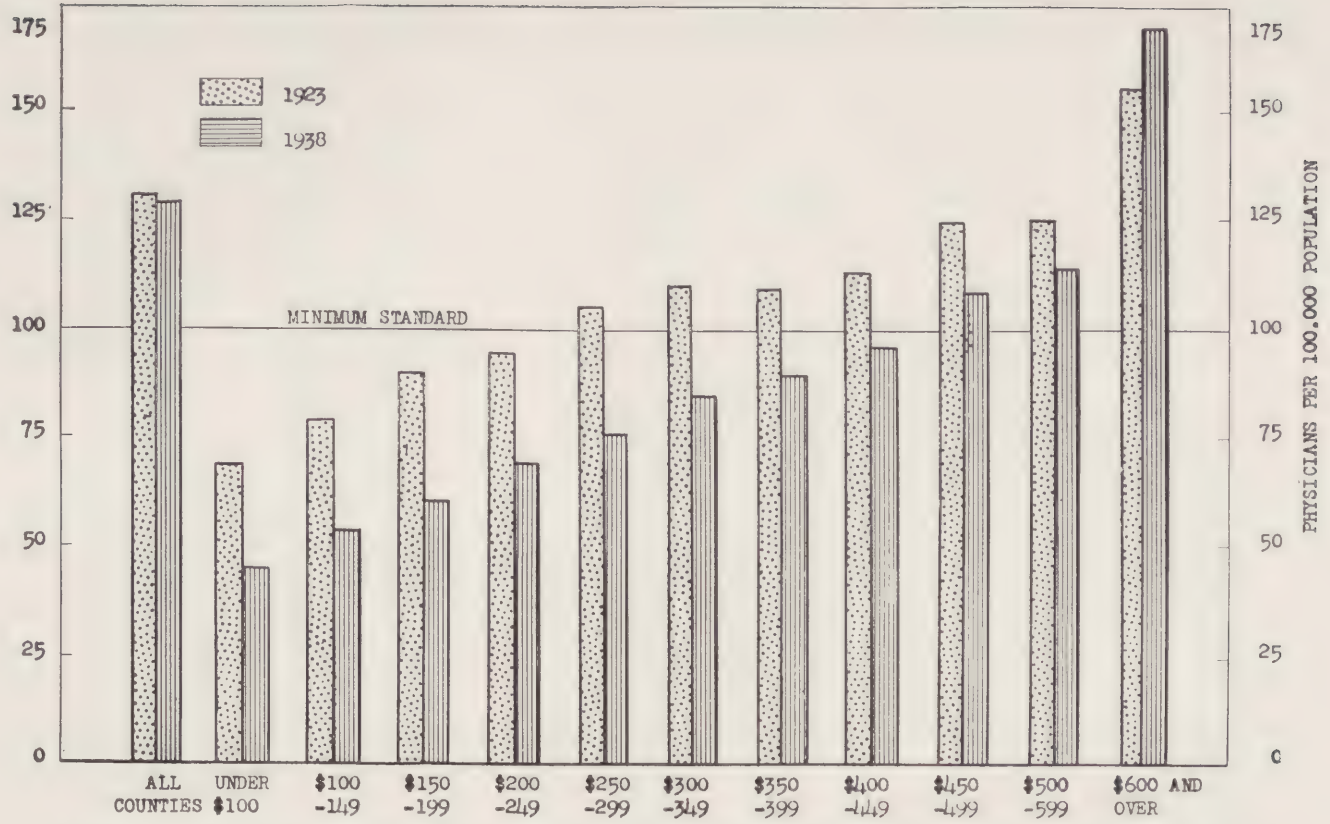


FIGURE 10. PHYSICIAN-POPULATION RATIOS RELATED TO PER CAPITA EFFECTIVE BUYING INCOMES, 1923 AND 1938.

(SOURCE: MOUNTIN, J. W., PENNELL, E. H., AND NICOLAY, V.: "LOCATION AND MOVEMENT OF PHYSICIANS, 1923 AND 1938 - EFFECT OF LOCAL FACTORS UPON LOCATION," PUBLIC HEALTH REPORTS, 57:1,945, (DECEMBER 18, 1942).

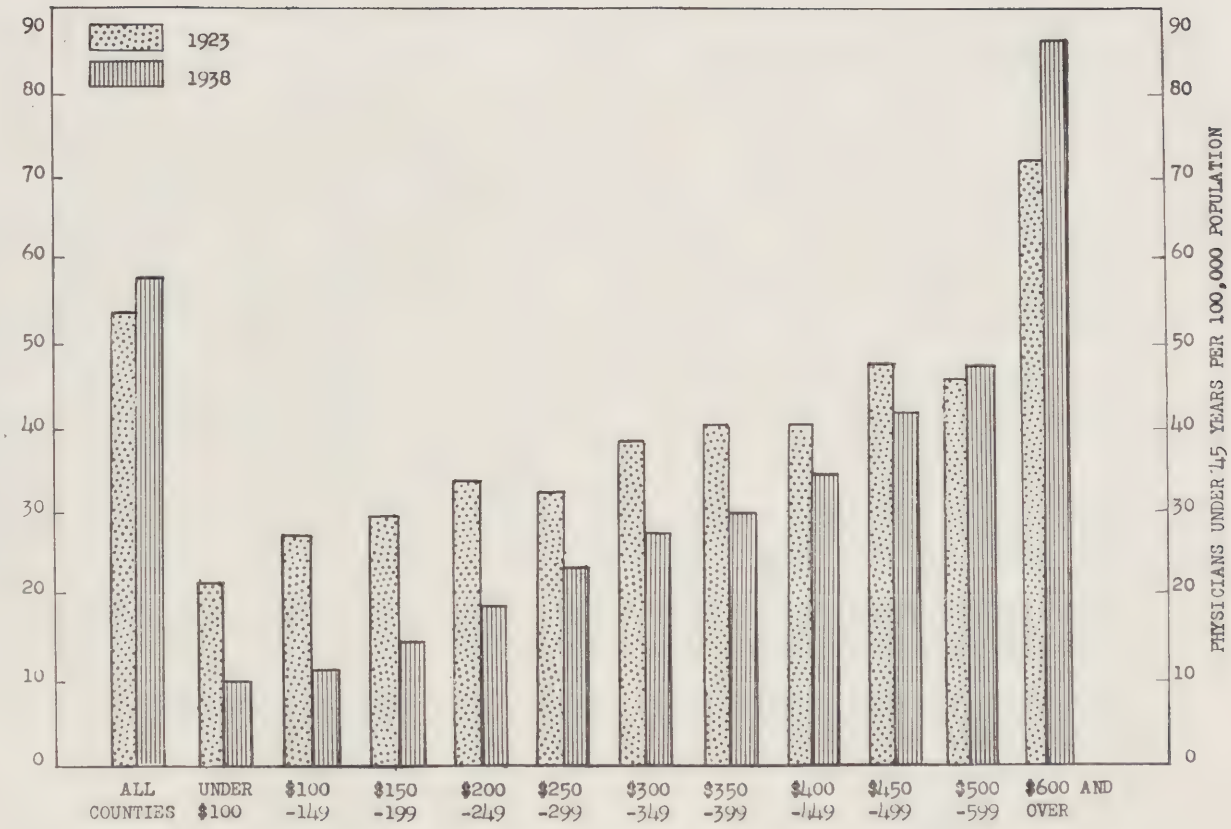


FIGURE 11. PHYSICIANS UNDER 45 YEARS OF AGE PER 100,000 POPULATION RELATED TO PER CAPITA EFFECTIVE BUYING INCOME, 1923 AND 1938.

(SOURCE: MOUNTIN, J. W., PENNELL, E. H., AND NICOLAY, V.: "LOCATION AND MOVEMENT OF PHYSICIANS, 1923 AND 1938 - EFFECT OF LOCAL FACTORS UPON LOCATION," PUBLIC HEALTH REPORTS, 57:1,945, (DECEMBER 18, 1942).

for the care and recovery of patients. For the country as a whole there were in 1938 only 67 physicians per 100,000 population in counties without general or allied special hospitals as contrasted with 157 for counties in which there were 250 beds or more." (See Figure 12.)

The authors go on to point out that "regardless of the income class of the county, the presence of large numbers of hospital beds reflected more attractive locations for physicians than did the limitation or absence of these facilities. This was especially true of physicians under 45 years of age. In all income classes the ratios of young physicians to population were twice as great where hospital beds were numerous as in counties without such facilities. The important contribution made by accessory facilities for medical care represented by large numbers of hospital beds upon the size of physician-population ratios suggests that such facilities alone afford attraction for establishing medical practice apart from other factors such as wealth, population expansion and urban character of counties."

It is difficult to evaluate the effect hospitals have in determining the location of physicians in Alabama. There were only three counties with 250 or more general hospital beds and these three, Jefferson, Mobile, and Montgomery, were those with the most favorable physician-population ratio and they likewise included the bulk of certified specialists in the state.

The Journal of the American Medical Association listed 65 general hospitals in Alabama in 1940. These were located in 35 of the 67 counties. Only 3 of the 35 counties were among the 25 counties with no incorporated places of 2,500 or more population. There were only 46 hospital beds in these 25 counties, the total population of which was 609,941.

It is also appropriate to note that of the 65 general hospitals listed, 30 hospitals, or nearly half, were owned by individuals or partnerships. The privately owned hospitals do not tend to attract physicians into the county because the facilities of the hospital are usually reserved exclusively for the use of the owners. Young physicians entering such a community frequently must turn over their patients to the owner of the hospital for x-ray or laboratory work, and also for surgery. This is often true even when their training has been such that they could perform much of the surgery themselves. Rather than do this they often will locate in a larger community where they are able to become

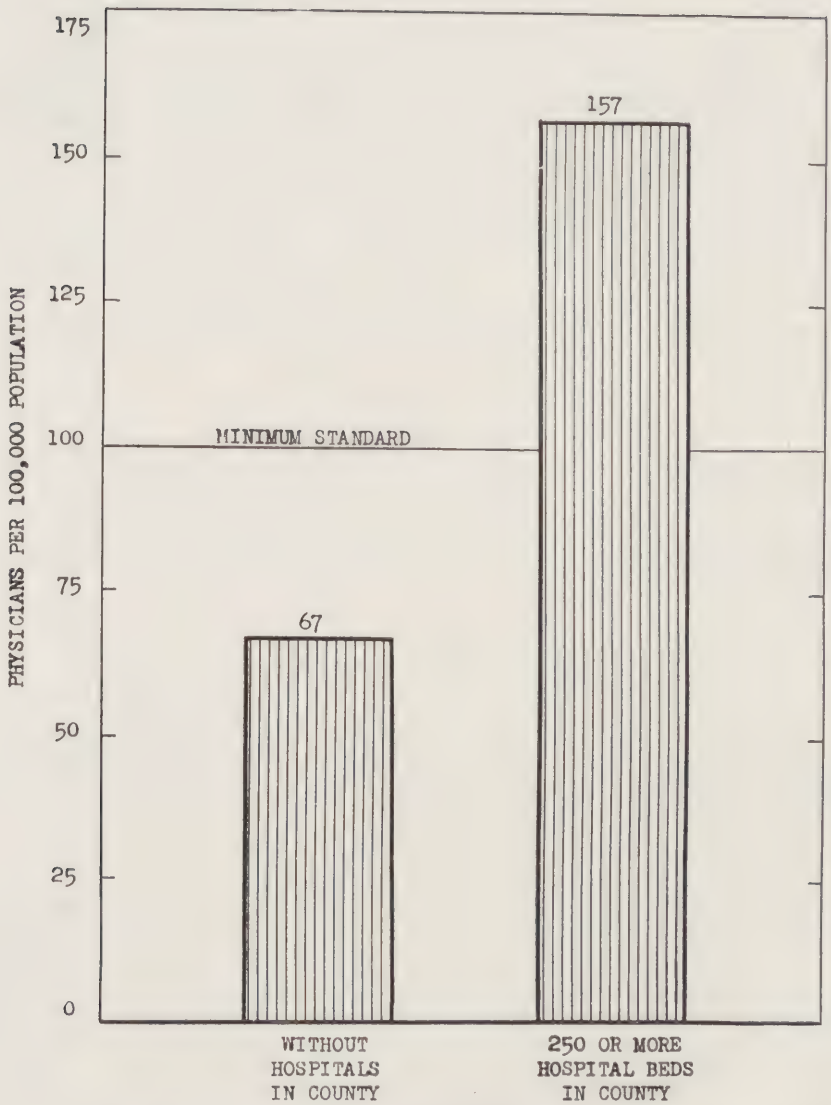


FIGURE 12. INFLUENCE OF HOSPITALS ON LOCATION OF PHYSICIANS, 1938.

(SOURCE: MOUNTIN, J.W., PENNELL, E.H., AND NICOLAY, V,: "LOCATION AND MOVEMENT OF PHYSICIANS, 1923 AND 1938 - EFFECT OF LOCAL FACTORS UPON LOCATION," PUBLIC HEALTH REPORTS, 57:1,945, (DECEMBER 18, 1942).

members of the staff and make full use of their training. This does not apply to every hospital that is owned by a physician, but it is true in a sufficient number of cases to be a factor in the shortage of physicians in some areas. The physician owning the hospital is not to be condemned. In most cases the patients utilizing these hospitals cannot pay much for their hospitalization and the hospital is operated at a loss. If the owner did not have the opportunity to do most of the surgery, allowing him to make up a deficit in the cost of operating the hospital, the hospital might have to close.

The lack of hospital facilities also has another effect on the influx of young physicians into the state. It has long been stated that the two year medical school was ineffective in influencing the supply of physicians because students had to finish their training elsewhere and did not return to Alabama. Despite the organization of a four year medical school, it is to be noted that many students will still go elsewhere to obtain suitable interneships and residencies as the number of hospitals in Alabama approved for interneships is small and the quality of interneship provided is not as high as it should be to attract the best qualified students. In 1942, Alabama had only four hospitals approved for interneships; Georgia had nine and Illinois had fifty-eight. A physician will often locate in the community in which he serves his interneship.

3. **Availability of Consultants and Specialists in Various Fields of Medicine.** The Public Health Service study states: "Another important adjunct to the practice of modern medicine is the accessibility of professional associates for consultation and exchange of professional ideas. The opportunities for consultation and collaboration in the case of obscure conditions become greater as the number of physicians in an area is increased. Where the provisions for medical care in a county are limited to a small number of physicians, the opportunities for interchange of professional ideas are fewer than in counties where the number of physicians is large." The effect of this factor is demonstrated by Figure 13 which is based on figures from the Public Health Service study. This reveals that, in counties where physicians in 1931 numbered less than 5 per county, there were only 69 physicians per 100,000 population in 1923 and the number had declined to 57 by 1938. Where there were 100 or more physicians per county in 1931, the ratio was 156 in 1923 and increased to 170 in 1938.

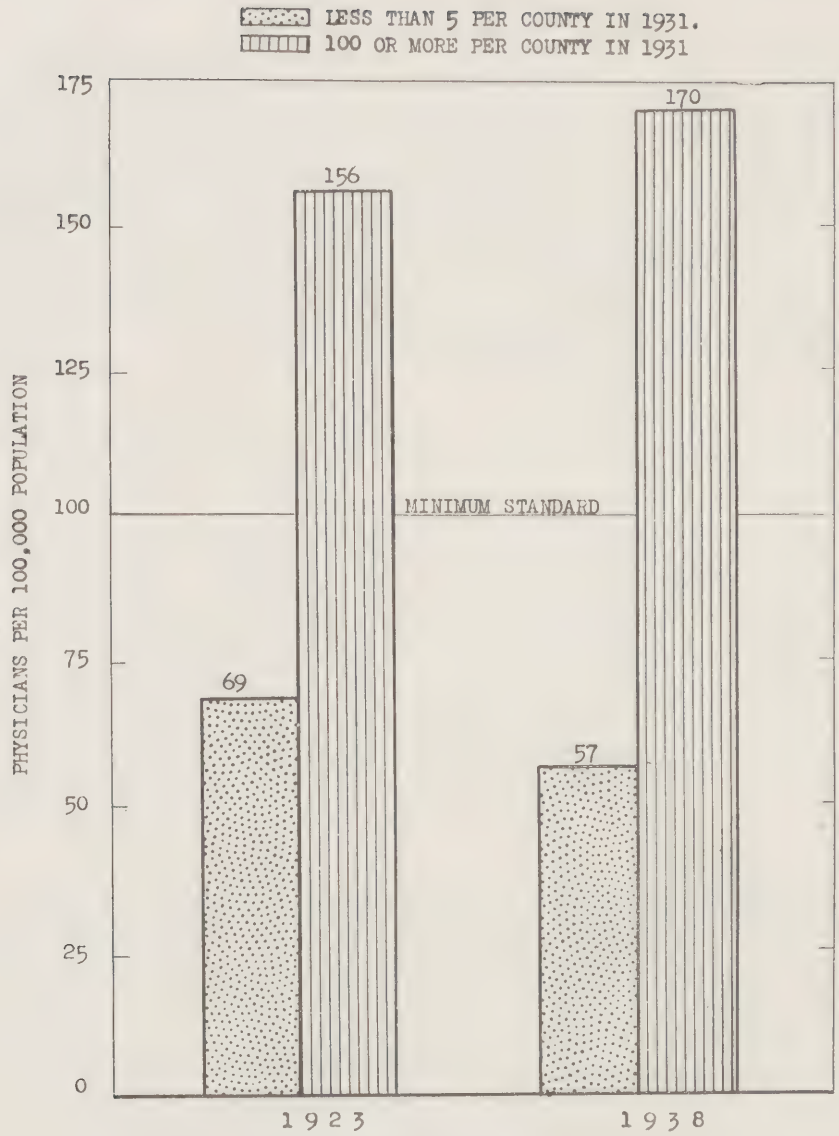


FIGURE 13. PHYSICIAN-POPULATION RATIO RELATED TO NUMBER OF PHYSICIANS IN AREA.

(SOURCE: MOUNTIN, J.W., PENNELL, E.H., AND NICOLAY, V.: "LOCATION AND MOVEMENT OF PHYSICIANS, 1923 AND 1938 - EFFECT OF LOCAL FACTORS UPON LOCATION," PUBLIC HEALTH REPORTS, 57:1,945, (DECEMBER 18, 1942).

4. **The Character of the Community.** The present day medical student is carefully selected before he enters medical school. He usually completes three or four years of college work before entering upon his professional training. If reared in a small town, he usually leaves home to attend college. He attends medical school in a large city and his associates are a highly intelligent group of individuals. He has the opportunity to enjoy many cultural developments possible only in the large city. He works in hospitals with the latest, finest type of equipment. If he is of rural origin, he frequently acquires an entirely different outlook on life and often prefers locating in a city or in an urban area.

The high degree of association between the urban character of a county and the number of physicians located therein is shown by Figure 14 which is based on figures from the same report. It reveals that in 1923 there were 92 physicians per 100,000 population residing in strictly rural counties (no incorporated place of 2,500 or more inhabitants located therein). The presence of urban places of less than 50,000 population in counties was reflected by an average ratio of 115, and counties with cities of 50,000 or more contained 159 physicians per 100,000 population. The corresponding ratios for 1938 were 69, 100, and 174.

Conclusion. The achievement of the goal in developing a state master hospital plan as suggested later in this report will materially improve the situation of inadequate and mal-distributed physicians. However, it is more than probable that there will still be some rural areas without adequate medical service. It is recommended that wherever the need is acute the county, with state help if necessary, contribute to its own welfare through inducements to physicians in the form of office space, equipment, laboratory facilities, living quarters, or possibly a cash subsidy.

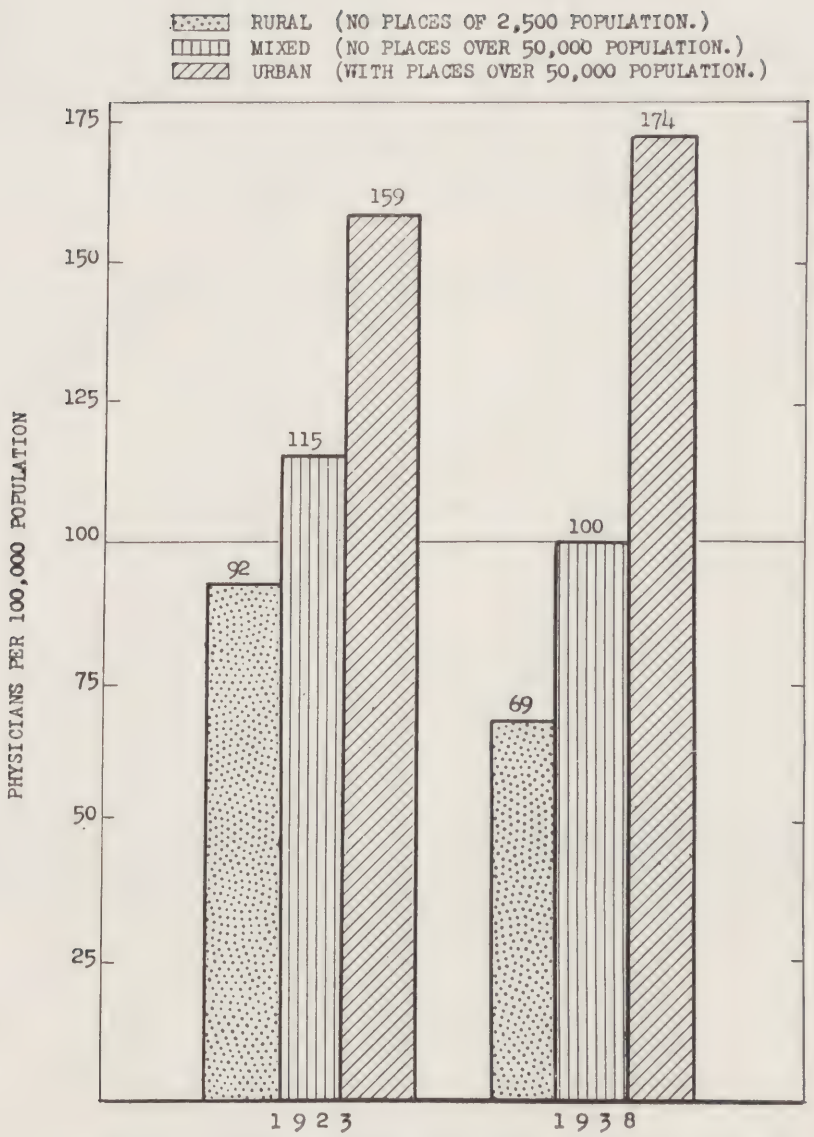


FIGURE 14. PHYSICIAN-POPULATION RATIO RELATED TO DEGREE OF URBANIZATION OF COUNTY, 1923 AND 1938.

(SOURCE: MOUNTIN, J. W., PENNELL, E. H., AND NICOLAY, V.: "LOCATION AND MOVEMENT OF PHYSICIANS, 1923 AND 1938 - EFFECT OF LOCAL FACTORS UPON LOCATION," PUBLIC HEALTH REPORTS, 57:1,945, (DECEMBER 18, 1942).

Chapter III

OTHER PROFESSIONAL SERVICES

Those factors which influence the number and distribution of physicians also operate in very much the same manner in relationship to dentists, nurses, and pharmacists. Particularly is this true of nurses and pharmacists. The adequacy of hospitals may not be a strong factor in influencing dentists, but economic factors and urbanization are very strong factors.

As these factors are eliminated or improved, the various professional services will be improved in Alabama. Since the factors have been analyzed in considerable detail in regard to physicians, it will be unnecessary to make a further detailed analysis of each of the other professions, and this chapter will merely indicate the existing situation.

Dentists.[1] As might be expected, the war situation has produced a decrease in the number of dentists in Alabama. In 1940 there were 636 dentists in actual practice, but this number had decreased to 487 in 1943 and to 479 in 1944. In 1940 one dentist served a population of 4,454 persons; in 1943 he served 5,582 persons, and in 1944 he served 5,675 persons. It is very obvious that a large number of persons failed to receive any dental attention.

The age distribution of Alabama dentists is presented in Table 9 and indicates that younger dentists are not filling the places gradually being vacated by the older men.

Not only is the number of dentists decreasing, but the distribution throughout the state is by no means equitable. The urban areas attract a greater proportionate number than do the more rural areas, and the three principal cities, Birmingham, Mobile, and Montgomery, contain 172 dentists, well over one-third of all Alabama dentists. Table 10 presents the data regarding this distribution.

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[1]Material for this section was prepared by Dr. W. E. Goodwin, representative of the Alabama Dental Association.

Table 9. Age Distribution of Alabama Dentists, June, 1943.

Age	Number	Percent
ALL DENTISTS	487	100.0
23-29 years	14	2.9
30-35 years	31	6.4
36-41 years	56	11.5
42-47 years	51	10.5
48-53 years	82	16.8
54-59 years	104	21.4
60 and over	149	30.6

Table 10. Distribution of Dentists in Alabama Cities, June, 1943.

Location	1943 Population	Dentists	Persons Per Dentist
ALABAMA	2,718,273	487	5,582
Birmingham	470,383*	103	4,567
Mobile	227,763*	33	6,902
Montgomery	115,246*	36	3,201
Remainder of State	1,904,881	315	6,047

*Population of entire county.

Nurses.[1] In 1940 a total of 3,138 nurses were registered in Alabama, of which only 2,248 were actually residing in the state. In 1943, 4,012 nurses were registered, with 2,705 residing in the state. Thus, nearly one-third were living in other states, and cannot be considered when evaluating the adequacy of nursing service in Alabama. Another factor which may distort the picture of nursing service is the fact that many inactive nurses keep up their registration. Table 11 presents data regarding the geographic distribution of nurses in Alabama, by race, for 1940 and 1943. The cities shown in the table were those in which there were nursing schools or large hospitals. The assumption is made that all nurses are active, since the number of inactive nurses by counties is unknown.

Complete information regarding the type of nursing was not available in 1940. However, it is known that of the 2,248 nurses residing in Alabama in 1940, 196 were employed by the county and state health departments. Another 51 were employed in industrial nursing or in other public health services. Table 12 presents more detailed data regarding the types of nursing in 1943.

[1]Material for this section was prepared by Miss Pearl Barclay, representing the Alabama Nurses Association.

Table 11. Distribution of Registered Nurses in Alabama, by Race, 1940 and 1943.

City	County	1940 Population	1940 Registered Nurses White	1940 Registered Nurses Negro	1940 Registered Nurses Total	1940 Persons Per Nurse	1943 Population	1943 Registered Nurses White	1943 Registered Nurses Negro	1943 Registered Nurses Total	1943 Persons Per Nurse
ALL NURSES		2,832,961	2,136	112	2,248	1,260	2,718,273	2,571	134	2,705	1,005
Anniston	Calhoun	63,319	41	3	44	1,439	70,610	72	3	75	941
Birmingham	Jefferson	459,930	726	64	790	582	470,383	838	64	902	521
Decatur	Morgan	48,148	36	....	36	1,337	45,576	32	....	32	1,424
Dothan	Houston	45,665	43	1	44	1,038	41,611	56	....	56	743
Eufaula	Barbour	32,722	15	....	15	2,181	27,600	13	....	13	2,123
Gadsden	Etowah	72,580	68	....	68	1,067	77,085	72	....	72	1,071
Jasper	Walker	64,201	22	....	22	2,918	57,507	23	....	23	2,500
Mobile	Mobile	141,974	217	1	218	651	227,763	314	1	315	723
Montgomery	Montgomery	114,420	165	16	181	632	115,246	210	19	229	503
Sylacauga		.....	(....	....	....)			(39	....	39)	
Talladega	Talladega	51,832	(62	1	63)	823	59,436	(39	3	42)	734
Troy	Pike	32,493	16	....	16	2,031	27,775	10	....	10	2,778
Tuscaloosa	Tuscaloosa	76,036	86	....	86	884	67,977	84	1	85	800
Tuskegee	Macon	27,654	1	20	21	1,317	26,815	7	29	36	745
All Other	Counties	1,601,987	638	6	644	2,488	1,402,889	762	14	776	1,808

Table 12. Occupations of Nurses Registered in Alabama, 1943.

Occupation	Number	Percent
ALL NURSES	4,012	100.0
Private Duty Nursing	802	20.0
Public Health	280	7.0
Institutional Nursing	1,123	28.0
Industrial Nursing	160	4.0
Office Nursing	120	3.0
Government Service	280	7.0
Anesthesia, Air Hostess, & Other	84	2.1
Inactive	762	19.0
No Information	401	10.0

Factual data are not available for the determination of all the factors affecting the number and distribution of nurses. However, the following factors appear to be operative:

1. The geographical distribution of nurses follows closely the agencies employing the nurses, such as hospitals, physicians, and industries.

2. The nurse population tends to be concentrated in the areas offering nurse education.

3. Personnel policies, including salaries, influence the amount and quality of nursing service. It is known that nurses leave the state for better opportunities elsewhere.

4. Women of superior education quite commonly select nursing schools outside the state and rarely return to the state for practice of their profession.

Nursing education varies greatly in the schools of nursing in operation in Alabama. Marked differences occur in qualifications of teaching staffs and in curricula, including amount of clinical experience required. The length of probation period ranges from three to six months. Duty hours are from eight to twelve per day. In 1940, twenty-eight schools were accredited and one school was conditionally approved. Of the 319 students taking the state board examination, 311 passed. There were 32 nurses registered by reciprocity, making a total of

343 approved for nursing practice in Alabama. In 1943 there were 376 graduates.

Table 13 presents the schools of nursing, and enrollment in 1940, and in 1943 in Alabama.

Table 13. Enrollments in Schools of Nursing in Alabama, 1940 and 1943.

Location	Hospital	Student Nurses 1940	Student Nurses 1943
ALL SCHOOLS		1,061	1,182
Anniston	Garner Memorial	28	20
Birmingham	Baptist	96	105
	Hillman	158	127
	Jefferson	----	12
	Norwood	81	66
	St. Vincent's	81	50
	South Highland Infirmary	82	96
Decatur	*Benevolent Society	19	17[d]
Dothan	Frazier-Ellis	40	29
	Moody	38	52
Eufaula	Salter	13	?
	Britt	7[d]	
Gadsden	*Forest General	16	11[d]
	Holy Name of Jesus	41	43
Jasper	*People's	25	18
	*Walker County Hospital	14	19
Mobile	City Hospital	48	42
	Mobile Infirmary	45	40
	Providence	60	34
Montgomery	Fraternal (colored)	15[d]	
	*Hubbard	20	23[d]
	St. Margaret's	70	68
Roanoke	Knight's Sanitorium	6[d]	
Sylacauga	*Drummond Frazier	21	25
Talladega	*Citizen's Hospital	15	22
Troy	*Edge	13	10
Tuscaloosa	*Bryce	34[d]	
	Druid City	30	40
	†Stillman (colored)	32	
	*Emily Estes Snedecor	----	30
Tuskegee Institute	John A. Andrew (colored)	34	62

[d]Discontinued after this date.
†Conditionally approved.
*Schools not meeting Red Cross requirements as of May 1, 1943.

Pharmacists.[1] Pharmacy plays an important part in the general public health of a state. Alabama has 680 drug stores distributed throughout all of its counties except Washington County, and most of these stores carry sufficient stocks of needed drugs and health supplies to take care of epidemics and other emergencies. There is at present one drug store for each 4,410 persons in the state. There are 800 registered pharmacists in these drug stores, filling approximately three million physicians' prescriptions annually. This represents one pharmacist for each 3,750 persons, but this ratio varies considerably with the size of the county, as indicated in Table 14.

Table 14. Relationship of Size of County and Supply of Pharmaceutical Services.

Size of County	Number of Persons	
	Per Drug Store	Per Pharmacist
Under 25,000	4,500	4,250
25,000 - 35,000	4,700	4,273
35,000 - 50,000	5,561	4,267
50,000 - 100,000	4,587	3,000
Over 100,000	3,160	1,975

The Alabama ratio of drug stores and pharmacists to population is low as compared with the national ratio of one drug store for every 2,394 persons and one pharmacist for every 1,646 persons. In Alabama pharmaceutical services are maintained only by long hours of work. A satisfactory standard would be one drug store and two pharmacists for each 2,000 persons, and to reach this goal it will be necessary to encourage pharmacists now in the armed services to return to the profession. However, the economic factor must also be solved, and it will be improved when hospital services become adequate.

At present all Alabama pharmacists registered since 1931 are graduates of a four year recognized college of pharmacy, and they must have graduated from a recognized high school prior to entering the pharmacy school. There are colleges of pharmacy at Howard College in Birmingham, and at Alabama Polytechnic Institute at Auburn, and recent legislation provides that a college of pharmacy be established in connection with the Medical College of Alabama in Birmingham.

[1]Material for this section was prepared by Mr. E. W. Gibbs, representative of the Alabama Pharmaceutical Association.

ERRATA

Page 36, last sentence should read ". . . and it is recommended that a college of pharmacy be established in connection with the Medical College of Alabama in Birmingham."

Since pharmacy is so intimately related to the operation of drug stores and the sales of many commodities other than prescribed medicines, no specific recommendations are made in this report in regard to the number or location of pharmacists. Such business operations are entirely within the province of private enterprise, and as such they will follow the demand for their services.

Chapter IV

THE HOSPITAL PICTURE

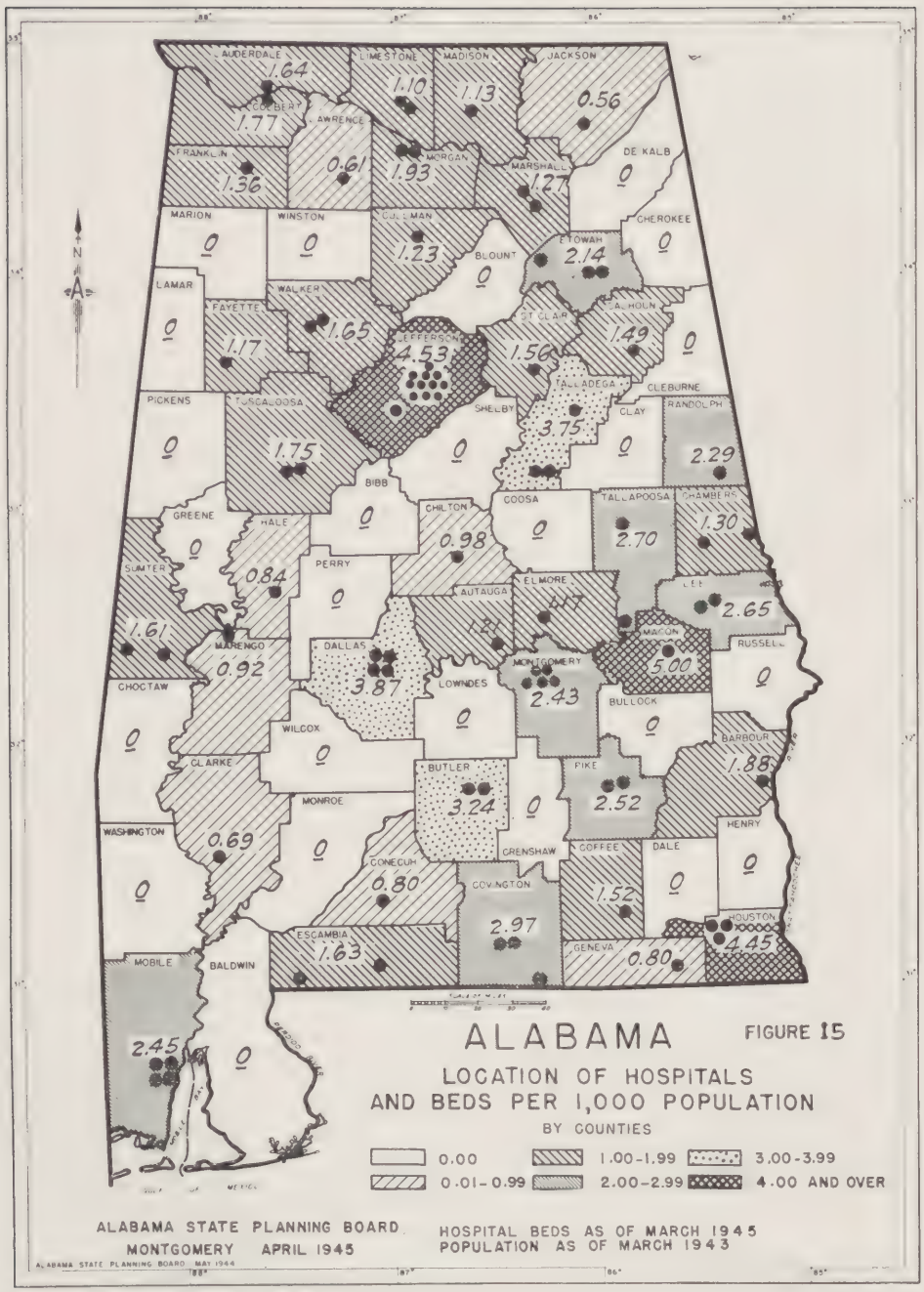
Hospitals probably constitute the most important single factor in the health picture of a state. Not only do they provide for the care of the sick, but also they attract physicians and nurses. They often become medical centers for public health services and education, and they act as a focus for medical services. Thus, the absence of adequate hospitals is apt to mean that a community will lack sufficient doctors and nurses and that other medical services will be inadequate.

Alabama possesses far from adequate hospital facilities. Of three states with less than two hospital beds per 1,000 population in 1939 Alabama was one. The need is great for all types: general, mental, tuberculosis, and nursing homes and other specialized types; and as this need is relieved the supply of physicians will increase, and gradually the health level of the state will improve.

General Hospitals. An inventory of hospital beds in March, 1945, indicated a capacity of 5,633 beds, or a ratio of 2.07 beds per 1,000 population.[1] It is known that some of the hospitals are sub-standard, but it would be impossible to determine the number of sub-standard hospitals without intensive and critical examination of each hospital. Such a procedure is outside the scope of this study, and therefore all existing hospital beds are assumed to be adequate. This assumption means that a serious understatement of the actual need is made. Appendix 5 indicates the location and capacity of Alabama's general hospitals and also shows the number of beds per thousand population in each county. (See also Figure 15.)

To present the bed-population ratio by counties is a very inadequate method of picturing the situation. County lines do not serve as boundaries for hospital services, and most hospitals will serve many people across county lines and in some cases across state lines. For example, Dale County has no hospitals, and therefore, according to the table, there are no beds available. However, Houston County, which

[1]Veterans' Hospitals are not included in this study.


LAUDERDALE
1.64
LIMESTONE
1.10
MADISON
1.13
JACKSON
0.56
COLBERT
1.77
LAWRENCE
0.61
MORGAN
1.93
MARSHALL
1.27
DE KALB
0
FRANKLIN
1.36
MARION
0
WINSTON
0
CULLMAN
1.23
CHEROKEE
0
ETOWAH
2.14
BLOUNT
0
LAMAR
0
FAYETTE
1.17
WALKER
1.65
JEFFERSON
4.53
ST CLAIR
1.56
CALHOUN
1.49
0
PICKENS
0
TUSCALOOSA
1.75
SHELBY
0
TALLADEGA
3.75
CLAY
0
CLEBURNE
RANDOLPH
2.29
BIBB
0
CHILTON
0.98
COOSA
0
TALLAPOOSA
2.70
CHAMBERS
1.30
GREENE
0
HALE
0.84
PERRY
0
SUMTER
1.61
AUTAUGA
ELMORE
LEE
2.65
MACON
5.00
RUSSELL
0
MARENGO
0.92
DALLAS
3.87
MONTGOMERY
2.43
LOWNDES
0
BULLOCK
0
CHOCTAW
0
WILCOX
0
BARBOUR
1.88
CLARKE
0
BUTLER
3.24
0
PIKE
2.52
MONROE
0
WASHINGTON
0.69
0
CRENSHAW
COFFEE
1.52
DALE
0
HENRY
0
CONECUH
6.80
COVINGTON
2.97
HOUSTON
4.45
ESCAMBIA
1.63
GENEVA
0.80
MOBILE
2.45
BALDWIN
0
N
A
ALABAMA
FIGURE 15
LOCATION OF HOSPITALS
AND BEDS PER 1,000 POPULATION
BY COUNTIES
0.00
0.01-0.99
1.00-1.99
2.00-2.99
3.00-3.99
4.00 AND OVER
ALABAMA STATE PLANNING BOARD
MONTGOMERY APRIL 1945
HOSPITAL BEDS AS OF MARCH 1945
POPULATION AS OF MARCH 1943
ALABAMA STATE PLANNING BOARD MAY 1944

adjoins Dale, has three hospitals in the corner of the county nearest Dale. The table shows that Houston has 4.45 beds per thousand, whereas in reality Houston is serving parts of Dale, Henry, and Geneva Counties, and consequently its bed ratio is very much smaller than the table indicates. The bed ratio for the state as a whole is not so greatly affected by this condition, although nearby hospitals in neighboring states may provide facilities for some residents of Alabama, and Alabama hospitals may provide facilities for some residents of bordering states.

Figure 15, showing the location of existing hospitals, indicates 25 counties which are completely without hospital facilities. All of these are relatively rural and would find it more difficult to support a well-equipped hospital than would some area where population was concentrated. Despite the absence of hospitals in these counties, there is a very small part of the state where hospitals are further than twenty-five miles away. This indicates that the geograpical distribution of hospitals is fairly adequate in most parts of the state, but does not mean that the quantity and quality of hospital beds are adequate.

At present many Alabama hospitals are small proprietary institutions owned, in most cases, by a physician. There is no system of hospitals in the state nor is there any integration of the existing hospitals. Such a haphazard situation obviously cannot provide the best medical care for Alabama's people. A well-planned, integrated system of hospitals is needed and such a plan will be presented in Chapter V.

Tuberculosis Hospitals.[1] The ultimate objectives of a tuberculosis program are to reduce the number of deaths, reduce the number of cases, and prevent the transmission of the disease. In view of the recent slight increase nationally in the rate of death it is imperative that the governments, local, state, and federal, and the public at large counteract this trend by an adequate program of hospitalization. Segregation of infectious cases is theoretically possible in the home, but actually the only effective means of treatment is by hospitalization in specialized institutions.

The problem of tuberculosis is a serious one in the United States. It is even more serious in Alabama. With 2.15 percent of the United States' population in Alabama in 1940, this state had 2.48 percent of

[1]This section is condensed from **Alabama Tuberculosis Hospitals**, Alabama State Planning Board, August, 1944.

the tuberculosis deaths. On a proportionate population basis, instead of having 1,499 deaths, Alabama should have had only 1,299 deaths. Two interrelated factors stand out in producing Alabama's higher rate. One factor is the large Negro population, which comprises approximately 35 percent of the population of the state. The tuberculosis rate of Negroes is almost three times that of whites. However, it must be remembered that tuberculosis infectiousness is no respecter of the color line, and any program should be designed to meet the over-all situation without regard to race. The second factor is the income level of the state. Tuberculosis is primarily a low-income disease although persons on all levels are susceptible. To illustrate, in New York City it was found that in areas where the average rent was $200 per month, the tuberculosis mortality rate was only 19 per 100,000 persons, whereas in areas where the average rent was $35 per month, the rate was 256 per 100,000 persons.

There are, at present, eight tuberculosis hospitals in Alabama with a total of 526 beds. Five of these are owned or controlled by the local counties; the other three are owned by non-profit associations. Table 15 presents location and type of control of present hospitals with number of beds and number of admissions as of 1943. This information is also presented in map form in Figure 16. It should be observed that the facilities are not uniformly distributed geographically. The northern and eastern parts of the state are reasonably well served by hospitals, although not by number of beds, but the southern and western sections are relatively void of tuberculosis hospitals, with the exception of Mobile County. In no part of the state is the number of beds near any reasonable standard of adequacy.

In 1942, in Alabama, there were 505 tuberculosis beds and 1,285 deaths from all forms of tuberculosis. This was a ratio of 0.39 beds per annual death. In the same year, the nation had 1.43 beds per annual tuberculosis death, Massachusetts reported 2.75 beds per death, and New York reported 2.50 beds per death. Thus, Alabama ranks considerably below the national average and far below the more wealthy states. At the same time, Alabama people are becoming more conscious of the dangers and treatment needs of tuberculosis as a result of the extensive work of the State Department of Health in education against tuberculosis and in tuberculin tests and x-rays. Consequently, although the need for adequate treatment facilities has long existed, the realization of this need on the part of the general population is rapidly growing, and the demand for more hospitals is increasing.

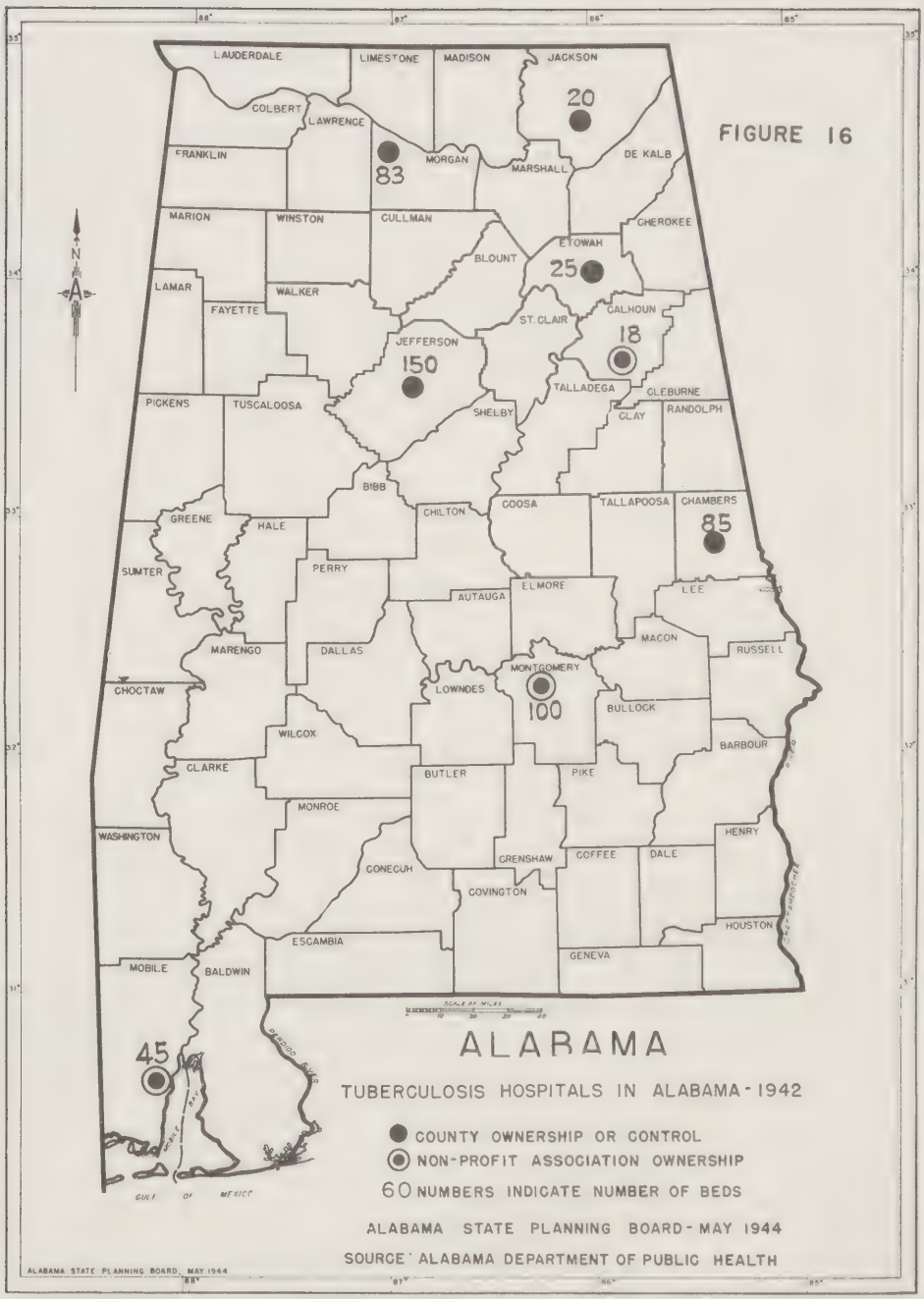


FIGURE 16
LAUDERDALE
LIMESTONE
MADISON
JACKSON
20
COLBERT
LAWRENCE
FRANKLIN
83
MORGAN
MARSHALL
DE KALB
MARION
WINSTON
CULLMAN
CHEROKEE
ETOWAH
25
BLOUNT
LAMAR
WALKER
FAYETTE
ST. CLAIR
CALHOUN
18
JEFFERSON
150
TALLADEGA
CLEBURNE
PICKENS
TUSCALOOSA
SHELBY
CLAY
RANDOLPH
BIBB
CHILTON
COOSA
TALLAPOOSA
CHAMBERS
85
GREENE
HALE
SUMTER
PERRY
AUTAUGA
ELMORE
LEE
MACON
RUSSELL
MARENGO
DALLAS
MONTGOMERY
100
LOWNDES
CHOCTAW
BULLOCK
WILCOX
BARBOUR
CLARKE
BUTLER
PIKE
MONROE
WASHINGTON
HENRY
GRENSHAW
COFFEE
DALE
CONECUH
COVINGTON
HOUSTON
ESCAMBIA
GENEVA
MOBILE
BALDWIN
45
GULF OF MEXICO
ALABAMA
TUBERCULOSIS HOSPITALS IN ALABAMA - 1942
COUNTY OWNERSHIP OR CONTROL
NON-PROFIT ASSOCIATION OWNERSHIP
60 NUMBERS INDICATE NUMBER OF BEDS
ALABAMA STATE PLANNING BOARD - MAY 1944
SOURCE: ALABAMA DEPARTMENT OF PUBLIC HEALTH
ALABAMA STATE PLANNING BOARD, MAY 1944

Table 15. Tuberculosis Hospitals in Alabama, 1944

Name	City	Ownership or Control	Beds	1943 Annual Admissions
ALL HOSPITALS			526	914
Etowah County Tuberculosis Sanatorium	Gadsden	County	25	40
Susie Parker Stringfellow Memorial Hospital	Anniston	Non-Profit Association	18	31
Jefferson County Tuberculosis Sanatorium	Birmingham	County	150	308
Morgan County Tuberculosis Sanatorium	Flint	County	83	145
Batson Memorial Sanatorium	Lafayette	County	85	101
Mobile County Tuberculosis Sanitarium	Mobile	Non-Profit Association	45	48
Montgomery Tuberculosis Sanatorium	Montgomery	Non-Profit Association	100	199
Tri-Counties Tuberculosis Sanatorium	Scottsboro	Counties	20	42

The trend of the tuberculosis mortality rate for both white and Negroes has been downward, as is indicated in Table 16. However, encouraging as is this gradual decrease, it should not be interpreted as meaning that the number of hospital beds needed is also decreasing. Alabama has always been deficient in the number of tuberculosis beds available; to continue, and accelerate, the decrease in tuberculosis rates it will be necessary to provide sufficient facilities for treatment. Furthermore, the number of beds needed is not only a function of the tuberculosis rates, but also of the number of people in the population. Until the war began Alabama had been growing steadily, and this increase will no doubt be resumed after victory is attained. Consequently, even though tuberculosis mortality **rates** are decreasing, it would be possible to have more cases and more deaths merely because of the population increase. Furthermore, it has been predicted by some doctors that tuberculosis will increase as a result of the war. This prediction has been partially substantiated by the slight national increase in 1943.

Table 16. Alabama Tuberculosis Mortality Rates in Selected Years.
(Rates per 100,000 population)

Year	Number			Rate		
	White	Negro	Total	White	Negro	Total
1942	506	837	1,343	26.7	83.8	46.4
1941	595	900	1,495	31.9	90.8	51.8
1940	589	922	1,511	31.8	93.6	53.1
1938	659	980	1,639	35.1	95.0	57.8
1936	717	1,140	1,857	39.1	112.8	66.8
1934	704	1,063	1,767	40.3	106.0	64.8
1932	759	1,303	2,062	43.4	134.4	79.2

Mental Hospitals.[1] The institutions for mental illness maintained by the state include Bryce Hospital at Tuscaloosa for white patients and Searcy Hospital at Mt. Vernon for Negro patients, both under the direction of the same board and the same superintendent. These institutions are maintained solely for the care and treatment of the mentally ill. The capacity of each institution is taxed by the demands of normal times from the civil population of the state, and the war demands have made it almost impossible to care for the needs of the civil population. Table 17 presents the number of beds available in public and private institutions and the number of new beds needed.

Table 17. Beds Available and Needed for Care of Mentally Ill and Mentally Deficient.

Institution	Race	Beds Available	Beds Needed
ALL BEDS		6,405	700
Bryce Hospital (State)	White	3,900	300
Searcy Hospital (State)	Negro	1,600	200
Partlow School for Mental Deficients (State)	White	855	200
Hillcrest Sanatorium (Private)	White	50	

In the past two years the chief problem has been that of personnel. The war has created conditions resulting in the loss of most of the nurses and attendants, all dentists, and about half of the physicians. This has made it necessary to restrict admissions, especially of white males. Applications for admission by white women who are merely

[1]Material for this section was obtained from Dr. W. D. Partlow, Superintendent, Alabama State Hospitals.

nursing problems, such as the harmless but incurable and the helpless bed-ridden types, are not accepted at present, and provision should be made for these patients in nursing homes. (See section on Nursing Homes.)

The Hillcrest Sanatorium in Birmingham, conducted by Dr. J. A. Becton, is the only private hospital for mental patients. There is a small nursing home in Prattville, operated by Mrs. Robert Oglesby, which does not provide medical care. These two institutions can provide for only a relatively small part of those persons who are able to pay for such care, and can provide for none of those persons unable to pay.

Veterans' hospitals for the mentally ill are located near Tuscaloosa and at Tuskegee, and it is probable that their capacities will be enlarged in the future. However, difficulties are sometimes experienced by ex-service men in gaining admittance to these hospitals. Consequently, efforts are exerted by families and interested physicians to gain admittance for these men into the state hospitals. This results in crowding of the state hospitals or in denial of admission to many non-service men.

Nursing Homes.[1] The problem of providing nursing care for the chronically ill is of grave concern to all individuals, agencies, and levels of government having responsibility for this group. This section will deal only with the problem as it relates to chronically ill persons who, because of the infirmities of age or other illnesses, cannot be cared for in private homes and are not subjects for care in the insane hospitals or tuberculosis sanatoria.

The lack of facilities, both public and private, and the high cost of care in the few existing private institutions make it exceedingly difficult, and frequently impossible, to plan satisfactorily for the chronically ill. In order to determine the extent of the problem as known by county departments of public welfare, information has been secured from the 67 local departments. They estimate that approximately 3,033 persons are in need of institutional nursing care, but are not receiving it because of inadequate facilities. (See Tables 18 and 21, and Appendix 6.) At the present time there are no known public nursing

[1]Material for this section was prepared by Alabama State Department of Public Welfare.

Table 18. Chronically Ill Persons Known to be in Need of Public Institutional Nursing Care, September, 1944.

TOTAL			3,298
1. Persons under care of county departments who are receiving private institutional nursing care			57
a. Aged		46	
b. Others (includes blind, handicapped, etc.)		11	
2. Additional persons in need of institutional nursing care			3,241
a. Those known to county departments		2,736	
(1) Aged	2,069		
(2) Others (includes blind, handicapped, etc.)	667		
b. Those in county almshouses		201	
c. Others*		304	

*Estimated on basis of requests coming to departments of public welfare or other knowledge of situations.

Table 19. Analysis of Almshouse Population, September, 1944*

1. Number of almshouses		5
2. Total number of residents		261
a. Estimated number in need of nursing care	201	
b. Estimated number who could be cared for in private homes	52	
c. Estimated number awaiting admission to state mental institutions	8	
3. Number of residents 65 years of age or over		151

*Based on August figures.

institutions for the chronically ill in this state; consequently, some of the five remaining almshouses have been used for bedridden individuals when nursing care has been necessary and no other facilities have been available.

At the time of the passage of the Social Security Act, the most usual form of public aid throughout the country was care in county almshouses. The Social Security Act provided on a national basis the first

grants-in-aid plan by which people might be aided in their own homes on a basis of individual need. Under the terms of the Social Security Act, however, no Federal funds are available to people living in public institutions, including county almshouses. One of the reasons for this limiting provision was to discourage the "hodge podge" of institutional care which then was in existence in some areas of the country. While there is still discussion as to whether this limitation should be retained in the Social Security Act, the fact that county almshouses have been closed in a large number of counties throughout the country, as well as in this state, stands as evidence that the original restriction was sound. Today there are only five almshouses in Alabama with a population of 261, whereas in 1935, when the state and county departments were created, there were 63 county homes with a population of 1,435. Approximately 75 per cent of the remaining 261 almshouse residents are in need of nursing care. (See Table 19 and Figure 17.)

Apparently private institutions are not the sole answer to the problem; first, because of the limitation of such facilities and, second, because of the high cost of care. There are known to be 24 private institutions offering care to adults in the state with a bed capacity of 571. (See Table 20.) Even though there are 208 vacancies in these private institutions, many of them are not available to bed-ridden individuals.

Table 20. Facilities of Private Institutions, September, 1944.

1. Total number of private institutions		24
2. Total bed capacity		571
a. Present number of residents	363	
b. Present number of vacancies	208	

In addition, 142 of these vacancies are in one fraternal institution which admits only members of the fraternal order or their close relatives. Even if sufficient bed space were available in private institu-

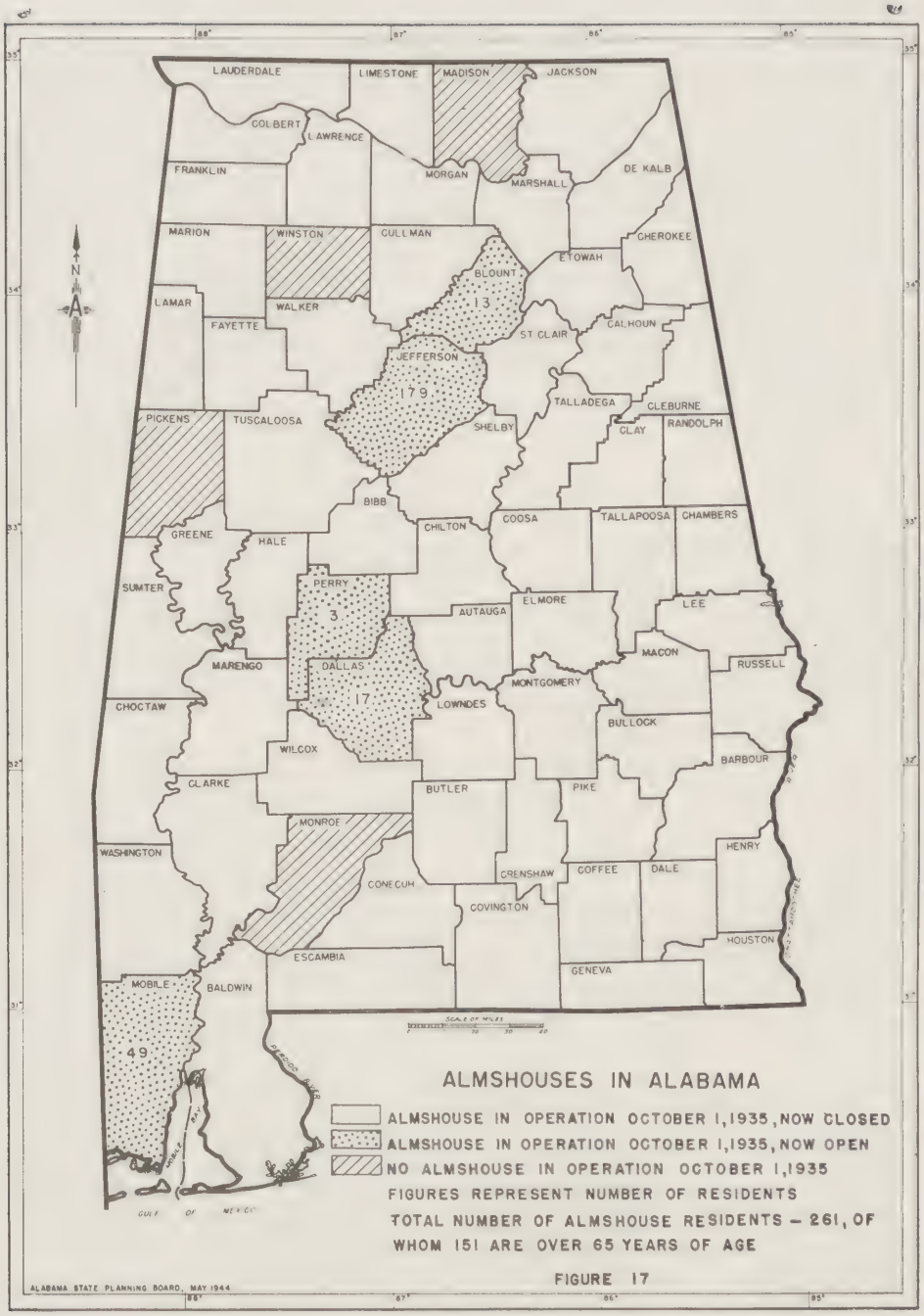

LAUDERDALE
LIMESTONE
MADISON
JACKSON
COLBERT
LAWRENCE
FRANKLIN
MORGAN
MARSHALL
DE KALB
MARION
WINSTON
CULLMAN
CHEROKEE
ETOWAH
BLOUNT
13
LAMAR
WALKER
FAYETTE
ST CLAIR
CALHOUN
JEFFERSON
179
TALLADEGA
CLEBURNE
PICKENS
TUSCALOOSA
SHELBY
CLAY
RANDOLPH
BIBB
GREENE
HALE
CHILTON
COOSA
TALLAPOOSA
CHAMBERS
SUMTER
PERRY
3
AUTAUGA
ELMORE
LEE
MACON
RUSSELL
MARENGO
DALLAS
17
MONTGOMERY
LOWNDES
CHOCTAW
BULLOCK
WILCOX
BARBOUR
CLARKE
BUTLER
PIKE
MONROE
WASHINGTON
HENRY
CRENSHAW
COFFEE
DALE
CONECUH
COVINGTON
HOUSTON
ESCAMBIA
GENEVA
MOBILE
BALDWIN
49
GULF OF MEXICO
ALMSHOUSES IN ALABAMA
ALMSHOUSE IN OPERATION OCTOBER 1, 1935, NOW CLOSED
ALMSHOUSE IN OPERATION OCTOBER 1, 1935, NOW OPEN
NO ALMSHOUSE IN OPERATION OCTOBER 1, 1935
FIGURES REPRESENT NUMBER OF RESIDENTS
TOTAL NUMBER OF ALMSHOUSE RESIDENTS – 261, OF WHOM 151 ARE OVER 65 YEARS OF AGE
ALABAMA STATE PLANNING BOARD, MAY 1944

FIGURE 17

Table 21. Number in Need of Public Nursing Care as Related to Facilities of Private Institutions, September, 1944.

1. Total number in need of public nursing care		3,298
2. Persons under care of county departments who are receiving private institutional care	57	
3. Number receiving no care at present	3,241	
4. Vacancies available in private institutions	208	
5. Number for whom no facilities are available	3,033	

tions, many persons would be unable to take advantage of these facilities because of the high cost of care. While rates range from $25.00 to $200.00 per month, it is difficult to secure care for bed-ridden persons for less than $75.00 to $100.00 per month.

Conclusion. The foregoing discussion of the various types of hospitals indicates Alabama's great need for further facilities. Chapter V, following, presents the master hospital plan which sets forth long-time goals which may serve as ideals, and the immediate goals which Alabama should achieve within two or three years after the war permits new construction.

Chapter V

MASTER HOSPITAL PLAN

In view of the foregoing description of hospital conditions in Alabama, it is obvious that increased facilities are necessary and that these new facilities should conform to a master plan. The development of a master plan of hospitals is merely an attempt to systematize the hospitals in Alabama and to provide for orderly growth in a manner which will best fill the urgent needs of the population.

A master hospital plan should be a flexible instrument; it should serve as a guide. As conditions change, the plan should be altered. The master plan proposed in this chapter has as its purpose the determination of the number and location of hospital beds needed in Alabama and it gives consideration to four types of hospitals: general, tuberculosis, mental, and nursing homes. However, since the greatest need is for general hospitals, more attention has been given to this type. The plan also devotes attention to the order of construction of which there are two phases. The first phase should be concerned with building hospitals in those areas now devoid of, or deficient in, hospital facilities. Cost estimates have been made for this phase of the plan. The second phase, which will need further study, will be concerned with the replacement of those already-existing hospitals which are substandard. These two phases obviously may overlap.

General Hospitals and Health Facilities

A hospital has been appropriately defined as an agency in which the medical resources of the community are mobilized and implemented. Other authorities have defined hospitals, not as houses for the care of the unfortunate sick, but as community centers for the dissemination of health.

It seems elementary to observe here that the activities of a community in the field of health should revolve around the community hospital. In harmony with this principle, it would be preferable and most appropriate if preventive services such as are provided by the local public health department could be housed in or near the community hospital. It would be especially desirable to have the clinics of the

local public health department located on the grounds of or as a part of a publicly owned community hospital. The increasing clinical laboratory facilities used by public health departments could then be integrated with the outpatient facilities of the hospital, thereby avoiding duplication of facilities. In those rural communities with an administrative health unit located in a town not having enough population to justify a community hospital, it would seem feasible for the health department to be a part of a health center providing a few beds for emergency purposes and obstetric care. Obvious economies would result from such arrangements. Therefore, in studying the overall needs in Alabama for general hospitals, the need for certain types of health department housing has been considered as an organic part of the problem and the general hospital master plan which has been evolved takes into account these local health service needs and integrates them with the general hospital master plan.

It is a characteristic of modern medical practice that physicians and hospitals go together. A little reflection indicates that such is a natural association. This association has been discussed in Chapter II. Any plan of attack to improve the health of the individuals of a community must revolve around a community hospital or health center since young medical graduates are accustomed to the use of modern diagnostic and other equipment provided in hospitals. While many interlocking factors bear upon the distribution of physicians, including such factors as income level, racial composition of the population, and others, there is general agreement that the factor of hospital facilities exerts a strong influence on physician distribution. Therefore, in making a start on a plan to improve the health of the people of Alabama serious consideration should be given to the need for, and location, of hospitals. From such a study there should evolve a master plan for general hospitals and health facilities. It is proposed to develop here on the basis of facts and in accord with certain fundamental principles a master plan for general hospitals, health centers and related facilities. For brevity, this plan will be referred to hereafter as the master plan for general hospitals.

Standards of Adequacy. One prerequisite for formulating a master plan for general hospitals is the establishment of a standard of adequacy. Most authorities in the field of medicine and public health consider 4.5 beds per 1,000 population as a minimum standard of adequacy. Some authorities modify this to provide 4.5 beds in urban places of 10,000 population or greater and 3.0 beds in the rural areas

and places of less than 10,000 population. In view of the low income level which prevails in Alabama, it seems realistic to lower the standard of 4.5 beds to 3.5 beds per 1,000 persons. This standard which will be used in this proposal is, therefore, a sound but not a utopian goal.

Essential Elements of a Master Plan for General Hospitals. A master plan for general hospitals in Alabama embraces a framework composed of one base hospital, seven regional hospitals, many district hospitals, and a number of health centers. The base hospital is the facility to be located at the state medical college and to provide all types of medical service, including complete diagnostic and research facilities. This is the main teaching hospital. Highly specialized cases such as those requiring brain surgery would be handled at this facility. Regional hospitals are to serve a region embracing several counties and should provide all types of hospital and medical service, including complete diagnostic facilities and should also provide for certain simple training facilities. Rare and exceptionally difficult cases received at a regional hospital would be referred to the base hospital. In addition, the staff members of the regional hospital should act as consultants to the staff of the district hospitals in certain specialized branches of medicine, for example, roentgenology and pathology. Moreover, clinical consultants from the regional hospital should frequently visit the district hospitals and hold clinical conferences. The district hospitals as envisioned in the master plan are those facilities directly serving the great majority of the people. These hospitals should provide for normal and emergency surgical, obstetric, medical, x-ray, and laboratory services. Assistance and some supervision should be provided through the regional hospitals. The difficult and unusual cases received at the district hospital would be referred to the regional hospital.

The fourth essential element of a master hospital plan is that of health centers. These centers with a small number of beds should be provided in rural areas of sparse population and should include facilities for maternity service and emergency surgery. Limited laboratory and x-ray services might be made available with appropriate supervision of, and assistance from, the district hospital. This unit of the plan is a relatively recent concept and, although regarded very favorably by medical and public health authorities, it is unwise to be too arbitrary at this time in making recommendations regarding size and the extent of the services which health centers will provide. These

decisions will best be made after experience in their operation and it is therefore advisable that their early development be rather slow.

Figure 18 displays the elements of a state master plan and the relationship of each element to the others. Housing for local health departments has not been considered as an element in itself but has been integrated with the above elements.

The Alabama standard of adequacy next needs to be divided among the essential elements of the master hospital plan. Using the Alabama standard of 3.5 beds per 1,000 population, this total ratio has been subdivided somewhat arbitrarily as follows:

0.5 beds per 1,000 population for the base hospital

0.5 beds per 1,000 population for regional hospitals

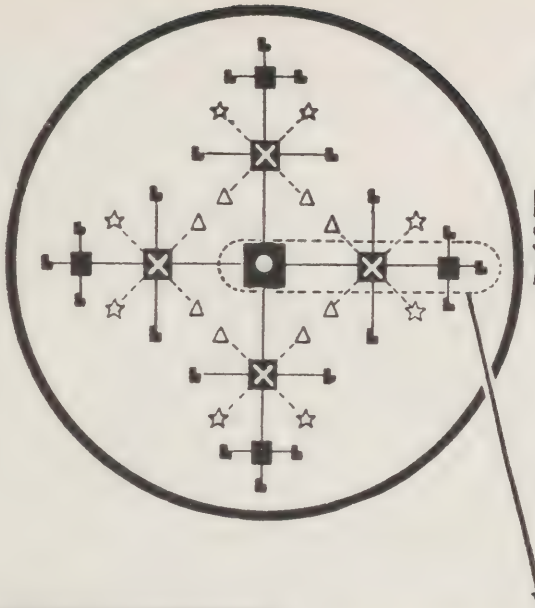
2.0 beds per 1,000 population for district hospitals

0.5 beds per 1,000 population for health centers.

The service area of the base hospital is the entire state of Alabama and, therefore, the number of required beds can be determined by using the ratio of 0.5 beds per 1,000 persons in the service area. Obviously the base hospital may also serve as a regional and district hospital and, therefore, there will be other beds in addition to this number. The same principle applies to regional hospitals in relation to the district hospitals. The service area of a regional hospital includes several counties which fall within an area of natural economic and social interests. The service area of a district hospital is usually limited to a radius of about 25 miles and includes not less than 25,000 persons. The service area of a health center is a small one of 10 to 15 mile radius. A health center is located primarily to supplement the district hospital, or to close a gap in sparsely populated areas where a district hospital cannot be justified.

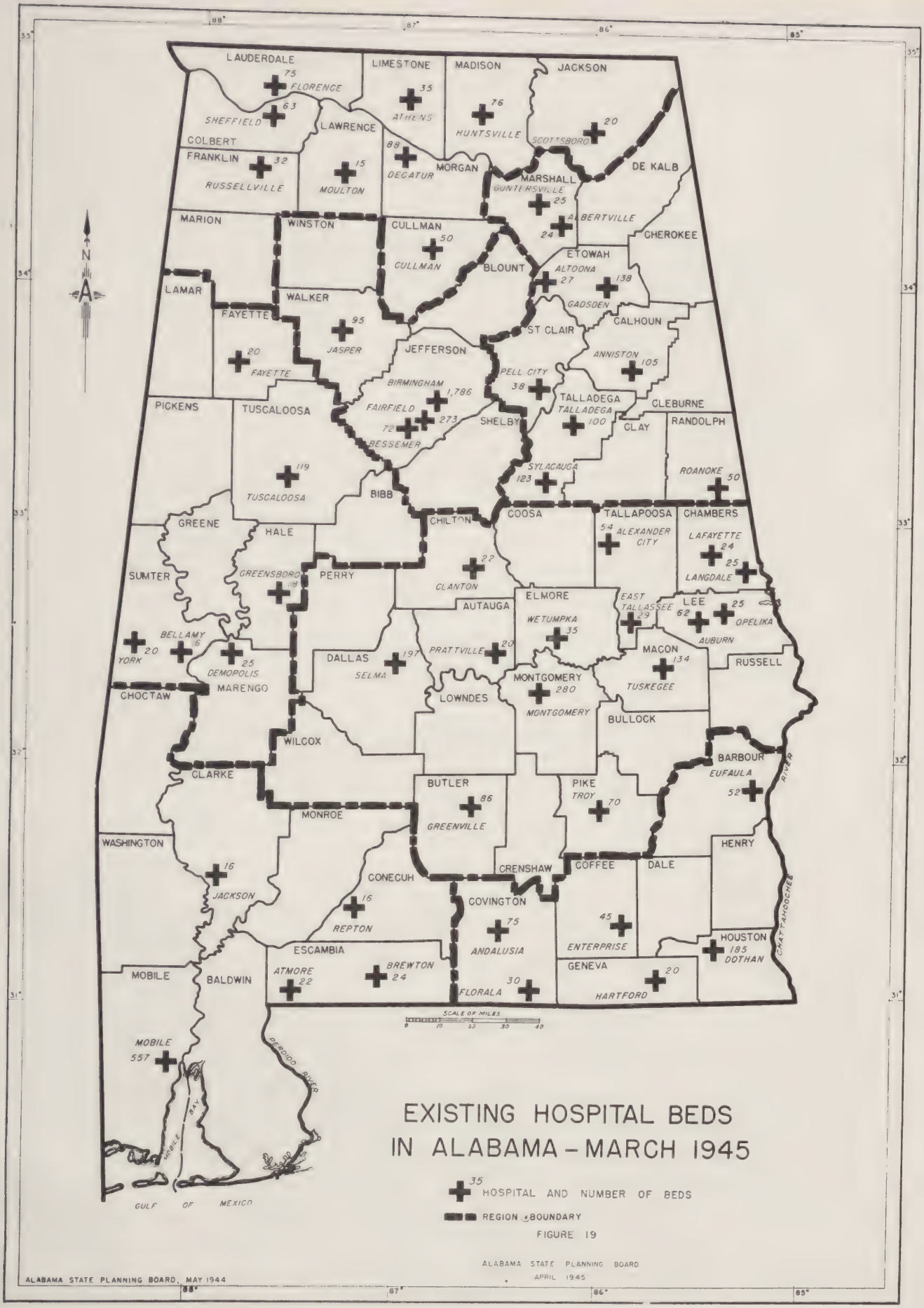
Alabama has been tentatively divided into seven regions following natural geographic, economic, and social lines. The seven regions are designated as follows: (1) Mobile region, (2) the Dothan region, (3) the Montgomery region, (4) the Tuscaloosa region, (5) the Birmingham region, (6) the Gadsden region, and (7) the Decatur region. The composition of the service area of the seven regions and the present hospital facilities are indicated in Figure 19.

COORDINATED HOSPITAL SERVICE PLAN



PLAN PROVIDES FOR CONSTANT EXCHANGE BETWEEN HOSPITALS OF INFORMATION, TRAINING, AND CONSULTATION SERVICE, AND PERSONNEL, AND FOR REFERRAL OF PATIENTS WHEN INDICATED

FIGURE 18



EXISTING HOSPITAL BEDS IN ALABAMA – MARCH 1945

35 HOSPITAL AND NUMBER OF BEDS

REGION BOUNDARY

FIGURE 19

ALABAMA STATE PLANNING BOARD
APRIL 1945

ALABAMA STATE PLANNING BOARD, MAY 1944

Hospital Facilities and Locations. Certain principles have been followed in selecting specific hospital locations. One principle rigidly followed was that no hospital of less than 50 beds should be provided. It is believed that a smaller hospital is not an economic unit. In general, the position has been taken that two 50-bed units each having a service area of a 25 mile radius and each serving approximately 25,000 persons would be preferable to a single 100-bed unit with a service area of greater radius and serving 50,000 persons, provided the two 50-bed hospitals are part of an integrated hospital system. Obviously, the two units would assist in a broader geographic and more decentralized physician distribution than would the single 100-bed unit. The principle of locating a hospital centrally to serve best the population group of the service area has been consistently followed; thus, each district hospital has been placed approximately at the center of the population group of the service area. Another factor recognized was that of transportation, especially the highway facilities.

A rough forecast of the 1950 population of each county has been made, and the beds required are based upon the estimated 1950 population.

On the basis of the above principles, specific locations of the various facilities within each region have been indicated. However, before outlining these plans, it is necessary to reiterate that they are tentative and flexible and that local factors as well as future events may make the eventual development of this plan somewhat different than is here proposed. It is also necessary to point out that it is beyond the scope of this study to evaluate existing facilities and, accordingly, no attempt is made to determine whether existing facilities will be enlarged, replaced, or operated as at present. These decisions can be made only after competent hospital authorities have the opportunity of making detailed studies of present facilities and local factors.

1. **Mobile Region.** (See Tables 22 and 23, and Figure 20.) The master plan as proposed for this region provides the following facilities. In Mobile County it is recommended that the existing 557 beds in the city of Mobile be retained and that they serve as district and regional hospital facilities. At a later date consideration should be given to the replacement of those facilities which are chronologically or technologically obsolete, but the urgent needs in rural areas should be satisfied prior to this. It is recommended that 50-bed district hospitals be provided with facilities for public health clinics at Bayou La

Table 22. Hospital Needs in Alabama Counties: Mobile Region

County	Population			Hospital Beds						
	Historic		Forecast	Requirements per 1,000 Population					New	Master
	1930	1940	1950	2.0 District	0.5 H.C.*	0.5 Regional	Total	Existing Beds	Beds Needed	Plan Allocation
MOBILE REGION	293,008	323,942	368,000	736	183	184	1,103	635	468	470- 486
Mobile	118,363	141,974	180,000	360	90	184	634	557	77	100
Baldwin	28,289	32,324	37,000	74	18	----	92	0	92	92- 96
Escambia	27,963	30,671	34,000	68	17	----	85	46	39	50
Conecuh	25,429	25,489	25,000	50	12	----	62	16	46	50
Monroe	30,070	29,465	29,000	58	14	----	72	0	72	70
Clarke	26,016	27,636	28,000	56	14	----	70	16	54	50
Choctaw	20,513	20,195	20,000	40	10	----	50	0	50	50
Washington	16,365	16,188	15,000	30	8	----	38	0	38	8- 20

*Health Center.

Table 23. Master Plan for General Hospitals and Health Centers, and Estimated Costs: Mobile Region

County	Place	Type of Facility	Additional Beds	Minimum Estimated Cost*	County Total
MOBILE REGION			470-486	$2,572,000	$2,572,000
Mobile	Bayou La Batre	Hospital Beds & Public Health Facilities	50	270,000	
	Mt. Vernon	Hospital Beds & Public Health Facilities	50	270,000	
	Mobile	Public Health Facilities	—	50,000	590,000
Baldwin	Fairhope	Hospital Beds & Public Health Facilities	76	400,000	
	Bay Minette	Health Center with Public Health Facilities	16- 20	68,000	468,000
Escambia	Undetermined	Hospital Beds	50	250,000	
Atmore & Brewton		Public Health Facilities	—	40,000	290,000
Conecuh	Evergreen	Hospital Beds	50	250,000	
		Public Health Facilities	—	20,000	270,000
Monroe	Monroeville	Hospital Beds & Public Health Facilities	70	370,000	370,000
Clarke	Grove Hill	Hospital Beds & Public Health Facilities	50	270,000	270,000
Choctaw	Butler	Hospital Beds & Public Health Facilities	50	270,000	270,000
Washington	Chatom	Health Center with Public Health Facilities	8- 20	44,000	44,000

*Based on smallest number of additional beds indicated.

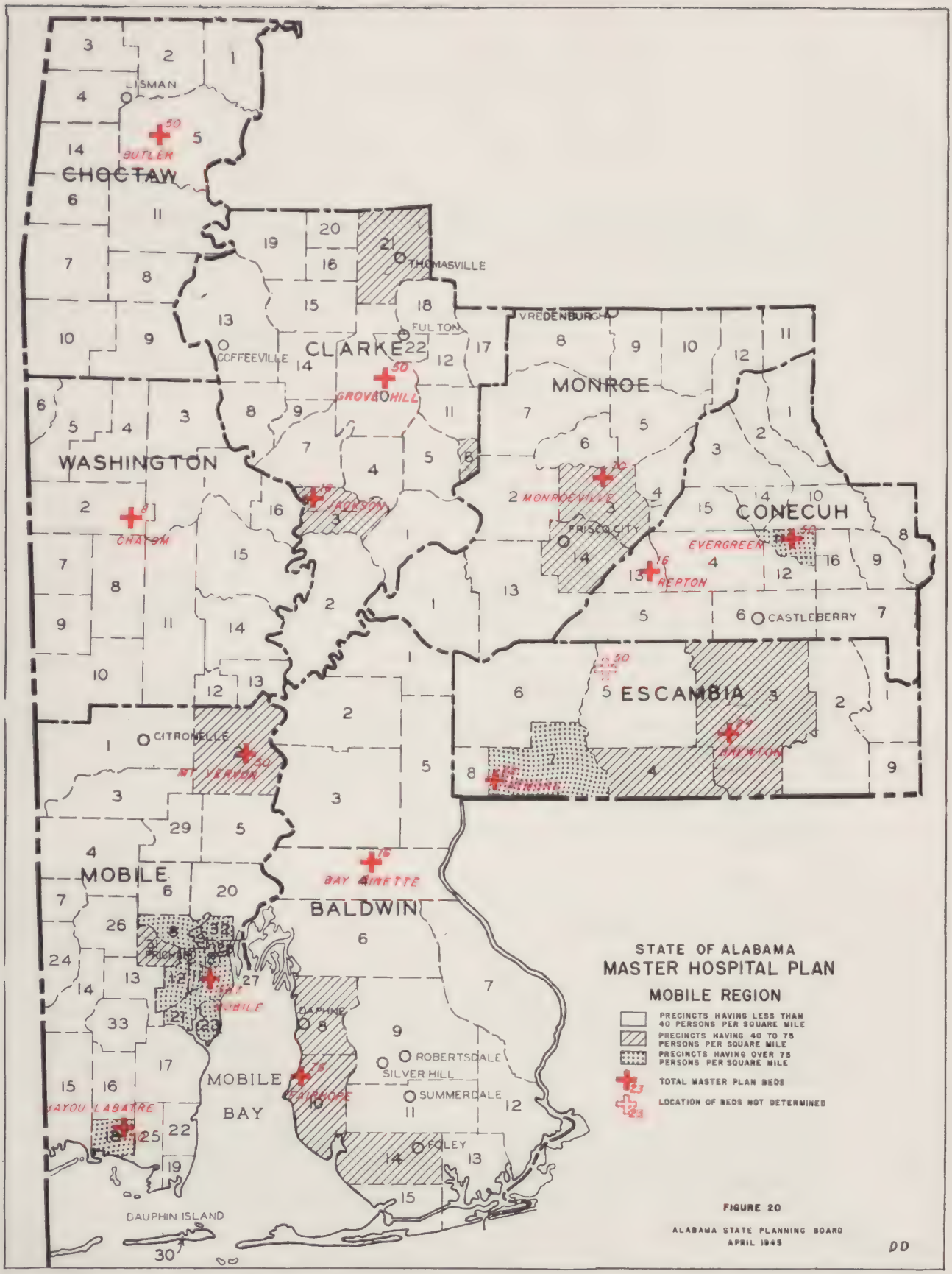


FIGURE 20

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Batre and Mt. Vernon. The assignment of 100 beds to Mobile County instead of the 77 beds actually needed as indicated on Table 22 has been made for practical considerations and because the Mt. Vernon facility would also serve the southern section of Washington County. In the city of Mobile it is recommended that the use of a separate building for public health administration be continued at least for the present and that clinical facilities be provided at such time as any hospital construction program is considered. Eventually, the present space will not be adequate, and enlargement or replacement will be needed.

Although at present Washington County has no hospital, in view of the sparse population, a district hospital can hardly be justified at this time. It is recommended that an 8 to 20-bed health center with space for public health services be provided at Chatom.

It is recommended that a 50-bed district hospital with facilities for public health services be provided at Butler in Choctaw County, which has no hospital, to serve all of Choctaw County and the northern section of Washington County.

A 50-bed district hospital is proposed for Clarke County, located at Grove Hill, and space for local public health facilities should be provided as a part of this unit. It is presumed that the 16-bed hospital at Jackson will continue in operation and these 16 beds have been taken into account in determining the beds needed for Clarke County. It may be that after further study part of the additional facilities needed can be provided by enlargement of this existing hospital.

In Monroe County, which contains no facilities, a 70-bed district hospital is recommended for Monroeville and this should include space for public health facilities.

Fifty additional hospital beds with facilities for public health services are recommended for Conecuh County, probably at Evergreen. It is presumed that the 16-bed hospital at Repton will remain in operation. The final allocation of the additional beds can only be made after a detailed study of the local situation.

Fifty additional beds and facilities for public health services are recommended for Escambia County, which now has 46 hospital beds. Space for public health facilities should be provided at Brewton and Atmore. It is presumed that there will be hospitals at Brewton and

Atmore, but the allocation of the additional space can only be determined after a study of such factors as the availability and suitability of the present facilities for enlargement.

A 76-bed district hospital with facilities for public health services located at Fairhope is recommended for Baldwin County. This county is without a hospital. In addition, a 16 to 20-bed health center at Bay Minette should be provided including space for public health services.

2. **Dothan Region.** (See Tables 24 and 25 and Figure 21.) In Covington County the present 105 beds appear to be adequate and no additional beds are suggested at this time. Study of these hospitals might indicate the need for improvement or replacement. Space at Andalusia for public health services is included in the plan.

In Geneva County the plan suggests an additional 50 beds and public health facilities at Hartford; an 8 to 20-bed health center in Samson; and space for local public health services in Geneva. The question of the utilization of the present 20-bed hospital in Hartford can be answered only after the availability and suitability of this institution for enlargement has been considered.

In Houston County the plan provides 230 hospital beds at Dothan which should provide enough beds for both district and regional hospital needs. The existing 185 beds leave a deficit of 45 beds. Space for local public health administration in Dothan is fairly adequate. An 8 to 20-bed health center is needed at Cottonwood. The allocation of new hospital beds can be made only after a thorough study of existing facilities, which should give full consideration to the availability and suitability of present hospitals for enlargement, as well as the possibility of a single large unit of 230 beds including public health facilities.

In Henry County there is no hospital and the plan provides a 55-bed hospital at Abbeville, and includes space for local public health services.

In Dale County, which also has no hospital, the plan provides a 58-bed hospital at Ozark. A new building for providing public health services has recently been completed.

In Coffee County the plan provides a 24-bed health center at Elba and space in the same building for local public health services. It is presumed that the 45-bed hospital in Enterprise will remain in operation, but space for public health services is needed.

Table 24. Hospital Needs in Alabama Counties: Dothan Region

County	Population			Hospital Beds						
	Historic		Forecast	Requirements per 1,000 Population					New	Master
	1930	1940	1950	2.0 District	0.5 H.C.*	0.5 Regional	Total	Existing Beds	Beds Needed	Plan Allocation
DOTHAN REGION	228,371	226,560	229,000	458	115	115	688	407	281	272- 296
Covington	41,356	42,417	43,000	86	22	.....	108	105	3	0
Geneva	30,104	29,172	30,000	60	15	.....	75	20	55	58- 70
Houston	45,935	45.665	46,000	92	23	115	230	185	45	53- 65
Henry	22,820	21,912	22,000	44	11	.....	55	0	55	55
Dale	23,175	22,685	23,000	46	12	.....	58	0	58	58
Coffee	32,556	31,987	32,000	64	16	.....	80	45	35	24
Barbour	32,425	32,722	33,000	66	16	.....	82	52	30	24

*Health Center.

Table 25. Master Plan for General Hospitals and Health Centers, and Estimated Costs: Dothan Region

County	Place	Type of Facility	Additional Beds	Minimum Estimated Cost*	County Total
	DOTHAN REGION		272-296	$1,372,000	$1,372,000
Covington	Andalusia	Public Health Facilities	—	20,000	20,000
Geneva	Hartford	Hospital Beds & Public Health Facilities	50	270,000	
	Samson	Health Center	8- 20	24,000	
	Geneva	Public Health Facilities	—	20,000	314,000
Houston	Dothan	Hospital Beds	45	225,000	
	Cottonwood	Health Center	8- 20	24,000	249,000
Henry	Abbeville	Hospital Beds & Public Health Facilities	55	295,000	295,000
Dale	Ozark	Hospital Beds	58	290,000	290,000
Coffee	Elba	Health Center with Public Health Facilities	24	92,000	
	Enterprise	Public Health Facilities	—	20,000	112,000
Barbour	Clayton	Health Center with Public Health Facilities	24	92,000	92,000

*Based on smallest number of additional beds indicated.

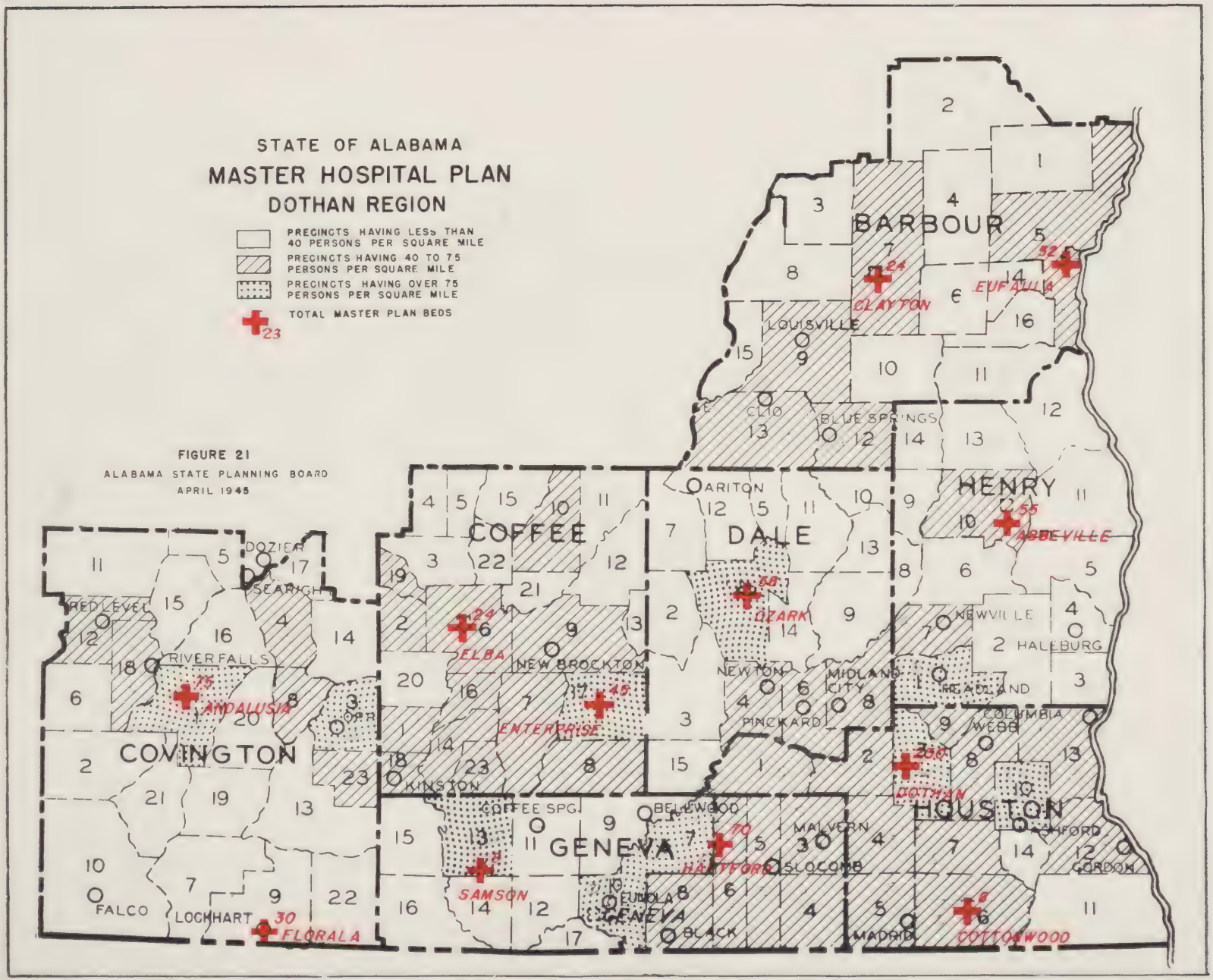

FIGURE 21
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In Barbour County the plan provides a 24-bed health center at Clayton, including space for public health services. It is presumed that the 52-bed hospital in Eufaula will remain in operation for the present. At a later date, a study should be made to determine whether this hospital is in need of improvement or replacement.

3. **Montgomery Region.** (See Tables 26 and 27, and Figure 22.) In Wilcox County a 50-bed district hospital is needed at Camden including space for public health services, and a 14 to 20-bed health center at Pineapple. At present there are no hospital facilities in Wilcox County.

In Butler County it seems that the existing hospital facilities are adequate at least from the viewpoint of the number of beds (86) available. The plan provides for space for public health services at Greenville. At a later date thought can be given to the replacement of such of the existing facilities in Greenville as are chronologically or technologically obsolete and this should include consideration of a single large hospital instead of two institutions.

In Pike County a 12 to 20-bed health center at Brundidge is the first need. At a later date, consideration should be given to improvement of existing hospital facilities, which provide 70 beds. Whether this should be done by remodeling, enlargement, or replacement can be determined only by a detailed local study which should carefully consider the advisability of a single 70-bed hospital which would include space for public health services.

In Bullock County a 50-bed district hospital with public health facilities is recommended for Union Springs. The county has no hospital at present.

In Crenshaw County a 50-bed district hospital including office space for public health services is needed at Luverne, and a 10 to 20-bed health center at Brantley. This county is also lacking in hospital facilities at this time.

In Russell County a 70-bed district hospital including space for public health services is recommended for Phenix City, and a 20-bed health center at Hurtsboro.

Table 26. Hospital Needs in Alabama Counties: Montgomery Region

County	Population			Hospital Beds							
	Historic		Forecast	Requirements per 1,000 Population							
	1930	1940	1950	2.0 District	0.5 H.C.*	0.5 Regional	Total	Existing Beds	New Beds Needed	Master Plan Allocation	
MONTGOMERY REGION	586,072	627,834	654,000	1,308	325	327	1,960	941	1,019	904-	954
Wilcox	24,880	26,279	26,000	52	13	----	65	0	65	64-	70
Butler	30,195	32,447	33,000	66	16	----	82	86	—4	---	
Crenshaw	23,656	23,631	24,000	48	12	----	60	0	60	60-	70
Pike	32,240	32,493	33,000	66	17	----	83	70	13	12-	20
Bullock	20,016	19,810	20,000	40	10	----	50	0	50	50	
Russell	27,377	35,775	37,000	74	18	----	92	0	92	90	
Macon	27,103	27,654	28,000	56	14	----	70	54**	16	20	
Montgomery	98,671	114,420	129,000	258	64	327	649	280	369	220-	230
Lowndes	22,878	22,661	22,000	44	11	----	55	0	55	50	
Dallas	55,094	55,245	56,000	112	28	----	140	197	—57	---	
Perry	26,385	26,610	27,000	54	13	----	67	0	67	66-	70
Autauga	19,694	20,977	22,000	44	11	----	55	20	35	16	
Elmore	34,280	34,546	35,000	70	18	----	88	35	53	50	
Lee	36,063	36,455	37,000	74	18	----	92	45***	47	50	
Chambers	39,313	[illegible]146	43,000	86	21	----	107	49	58	58	
Tallapoosa	31,1[illegible]	[illegible]270	38,000	76	19	----	95	83	12	12-	20
Coosa	12,4[illegible]	[illegible]460	14,000	28	7	----	35	0	35	36-	40
Chilton	24,5[illegible]	27,955	30,000	60	15	----	75	22	53	50	

*Health Center.

**Hospital in Macon County has 134 beds located at Tuskegee Institute. 54 beds are considered as being open to the public; the remaining 80 beds are considered as being reserved for students.

***Hospital at Alabama Polytechnic Institute has 62 beds, of which 20 are considered as open to the public.

Table 27. Master Plan for General Hospitals and Health Centers, and Estimated Costs: Montgomery Region

County	Place	Type of Facility	Additional Beds	Minimum Estimated Cost*	County Total
	MONTGOMERY REGION		904-954	$4,588,000	$4,588,000
Wilcox	Camden	Hospital Beds & Public Health Facilities	50	270,000	
	Pineapple	Health Center	14- 20	42,000	312,000
Butler	Greenville	Public Health Facilities		20,000	20,000
Crenshaw	Luverne	Hospital Beds & Public Health Facilities	50	270,000	
	Brantley	Health Center	10- 20	30,000	300,000
Pike	Brundidge	Health Center	12- 20	36,000	36,000
Bullock	Union Springs	Hospital Beds & Public Health Facilities	50	270,000	270,000
Russell	Phenix City	Hospital Beds & Public Health Facilities	70	370,000	
	Hurtsboro	Health Center	20	60,000	430,000
Macon	Tuskegee	Health Center with Public Health Facilities	20	80,000	80,000
Montgomery	Montgomery	Hospital Beds & Public Health Facilities	200	1,050,000	
	Ramer	Health Center	20- 30	60,000	1,110,000
Lowndes	Hayneville	Hospital Beds & Public Health Facilities	50	270,000	270,000
Dallas	Selma	Public Health Facilities		30,000	30,000
Perry	Marion	Hospital Beds & Public Health Facilities	50	270,000	
	Uniontown	Health Center	16- 20	48,000	318,000
Autauga	Billingsley	Health Center	16	48,000	
	Prattville	Public Health Facilities		20,000	68,000
Elmore	Tallassee	Hospital Beds & Public Health Facilities	50	270,000	
	Wetumpka	Public Health Facilities		20,000	290,000
Lee	Opelika	Hospital Beds & Public Health Facilities	50	270,000	270,000
Chambers	Undetermined	Hospital Beds & Public Health Facilities	58	310,000	
	Lafayette	Public Health Facilities		20,000	330,000
Tallapoosa	Dadeville	Health Center with Public Health Facilities	12- 20	56,000	56,000
Coosa	Goodwater	Health Center	20	60,000	
	Rockford	Health Center with Public Health Facilities	16- 20	68,000	128,000
Chilton	Clanton	Hospital Beds & Public Health Facilities	50	270,000	270,000

*Based on smallest number of additional beds indicated.

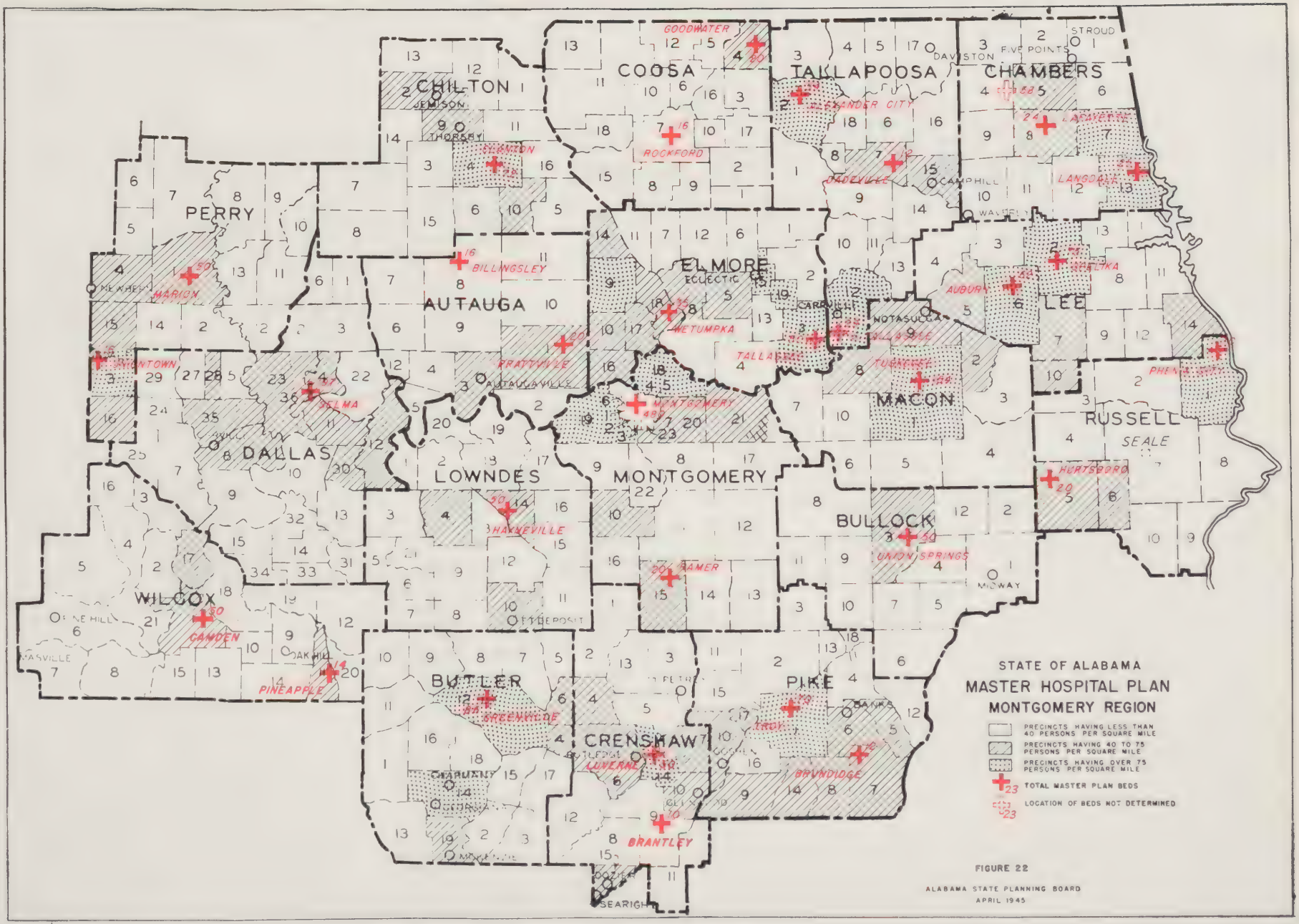

FIGURE 22

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In Macon County in view of the 134-bed public hospital for Negroes at Tuskegee Institute and in view of the small white population of the county, it appears that a district hospital is not needed. Some of the beds are considered as being set aside for the students at Tuskegee Institute, but the total capacity is such that the needs for Negroes in the county can be handled adequately. It is recommended that a 20-bed health center be provided at Tuskegee for white patients, and space for public health services should be included in this building.

In Montgomery County the regional beds needed are 327, and the district beds are 258, making a total of 585 beds. There are at present 280 hospital beds available. Some of these facilities are obsolete, others are quite serviceable. Thus, about 300 new beds are needed. However, in view of the fact that Selma in Dallas County has a larger ratio of beds to population than other counties in the region and is serving a large area, and because Selma may continue as a sub-regional center, it appears wise to provide at the present time for only the 200-bed regional hospital recommended for each region. Whether one of the present hospitals should be enlarged or whether a new unit should be provided can be determined only after a very complete study of local factors which is beyond the scope of this presentation. The utilization of the former Memorial Hospital can be decided only after careful consideration of its suitability in terms of what a modern hospital should be and the extent to which it has been altered by the present owners. Local public health services should be closely integrated with the new facilities. A 20 to 30 bed health center should be built at Ramer.

In Lowndes County, which has no hospital, a 50-bed district hospital, including space for public health services, is recommended for Hayneville.

In Dallas County it appears that no new facilities are needed immediately except space for public health services at Selma which the plan provides. At a later date, consideration can be given to the replacement of such of the existing hospital facilities as are chronologically or technologically obsolete. The plan envisions Selma as remaining somewhat of a regional medical center, supplementary to Montgomery, particularly since its adequate supply of 197 hospital beds is at present based on service of a wide area. (See discussion of Montgomery County.)

In Perry County a 50-bed district hospital with space for public

health services is needed at Marion, and a 16-bed health center at Uniontown. At present the county has no hospital.

In Autauga County a 16-bed health center at Billingsley and space for public health services at Prattville are suggested to supplement the existing 20 beds.

In Elmore County about 88 hospital beds are needed. There is a 35-bed hospital in Wetumpka and the chief need is, therefore, in the vicinity of Tallassee. There is already a 29-bed hospital in East Tallassee. Another study to determine whether this hospital is available and suitable for enlargement to serve both Tallapoosa County and eastern Elmore County or whether a new unit should be constructed in Tallassee will be needed before action is taken. Space for public health services should be provided both in this section and in Wetumpka.

In Lee County 50 additional beds including space for public health services are needed at Opelika. There are approximately 45 beds available to the public in Lee County.

In Chambers County 58 additional beds are needed including space for public health services. Public health services should be provided in Lafayette. The location and utilization or replacement of the present facilities in Langdale require additional study before a decision can be reached. The county has 45 beds at this time.

In Tallapoosa County a 12 to 20-bed health center is needed at Dadeville. (See also remarks under Elmore County.) The county already has a total of 83 beds available.

In Coosa County a 20-bed health center is needed at Goodwater, and a 16-bed health center with office space for local public health administration at Rockford. Coosa County at present has no hospital facilities.

In Chilton County 50 additional beds are needed at Clanton, which now has 22 beds. Space should be provided for local public health services. The use of the existing hospital in this expansion will require additional study of local factors.

4. **Tuscaloosa Region.** (See Tables 28 and 29, and Figure 23.) In Lamar County a 50-bed district hospital including space for public health services is needed at Vernon, since there is no hospital in the county.

In Fayette County add 30 beds to the existing 20 hospital beds at Fayette subject to an appropriate agreement with present owners of the existing hospital, and provide space for public health services.

In Marengo County 50 additional hospital beds are needed at Demopolis to supplement the present 25 beds, as well as space for public health services, and a 16-bed health center at Linden with public health facilities should be provided.

In Tuscaloosa County 200 additional beds are needed at Tuscaloosa because of the regional beds required. Studies to determine the relation of present facilities (119 beds) to the new beds must be made before a decision can be reached in this matter. Space for public health services at Tuscaloosa is also needed and a 16-bed health center at New Lexington should be provided.

In Pickens County, which has no hospital, a 56-bed district hospital with facilities for public health services is recommended at Aliceville; a 16-bed health center at Reform; and space for public health services at Carrollton.

In Sumter County a 16-bed health center including space for public health services should be provided at Livingston, and a 16-bed health center at Gainesville. The county now has 36 beds.

In Greene County a 50-bed district hospital including space for public health services is suggested for Eutaw. No beds are now available.

In Hale County 32 additional beds are needed in Greensboro. The availability and suitability of the existing 18-bed hospital for enlargement should be studied before any action is taken; space for public health services should be provided. A 16-bed health center at Moundville is needed.

In Bibb County, without any hospital facilities, a 50-bed district hospital including facilities for public health services is needed at West Blocton, and an 8 to 20-bed health center with space for public health services at Centerville.

Table 28. Hospital Needs in Alabama Counties: Tuscaloosa Region.

County	Population			Hospital Beds						
	Historic		Forecast	Requirements per 1,000 Population						
	1930	1940	1950	2.0 District	0.5 H.C.*	0.5 Regional	Total	Existing Beds	New Beds Needed	Master Plan Allocation
TUSCALOOSA REGION	255,644	272,996	286,000	572	141	143	856	218	638	622- 634
Lamar	18,001	19,708	20,000	40	10	.....	50	0	50	50
Fayette	18,443	21,651	22,000	44	11	.....	55	20	35	30
Marengo	36,426	35,736	36,000	72	18	.....	90	25	65	66
Tuscaloosa	64,153	76,036	87,000	174	43	143	360	119	241	216
Pickens	24,902	27,671	29,000	58	14	.....	72	0	72	72
Sumter	26,929	27,321	27,000	54	13	.....	67	36	31	32
Greene	19,745	19,185	19,000	38	9	.....	47	0	47	50
Hale	26,265	25,533	26,000	52	13	.....	65	18	47	48
Bibb	20,780	20,155	20,000	40	10	.....	50	0	50	58- 70

*Health Center.

Table 29. Master Plan for General Hospitals and Health Centers, and Estimated Costs: Tuscaloosa Region.

County	Place	Type of Facility	Additional Beds	Minimum Estimated Cost*	County Total
		TUSCALOOSA REGION	622-634	$3,172,000	$3,172,000
Hale	Greensboro	Hospital Beds & Public Health Facilities	32	180,000	
	Moundville	Health Center	16	48,000	228,000
Greene	Eutaw	Hospital Beds & Public Health Facilities	50	270,000	270,000
Fayette	Fayette	Hospital Beds & Public Health Facilities	30	170,000	170,000
Tuscaloosa	Tuscaloosa	Hospital Beds & Public Health Facilities	200	1,050,000	
	New Lexington	Public Health Facilities	16	48,000	1,098,000
Pickens	Aliceville	Hospital Beds & Public Health Facilities	56	300,000	
	Carrollton	Public Health Facilities		20,000	
	Reform	Health Center	16	48,000	368,000
Marengo	Demopolis	Hospital Beds & Public Health Facilities	50	270,000	
	Linden	Health Center with Public Health Facilities	16	68,000	338,000
Bibb	West Blocton	Hospital Beds & Public Health Facilities	50	270,000	
	Centerville	Health Center with Public Health Facilities	8- 20	44,000	314,000
Sumter	Livingston	Health Center with Public Health Facilities	16	68,000	
	Gainesville	Health Center	16	48,000	116,000
Lamar	Vernon	Hospital Beds & Public Health Facilities	50	270,000	270,000

*Based on smallest number of additional beds indicated.

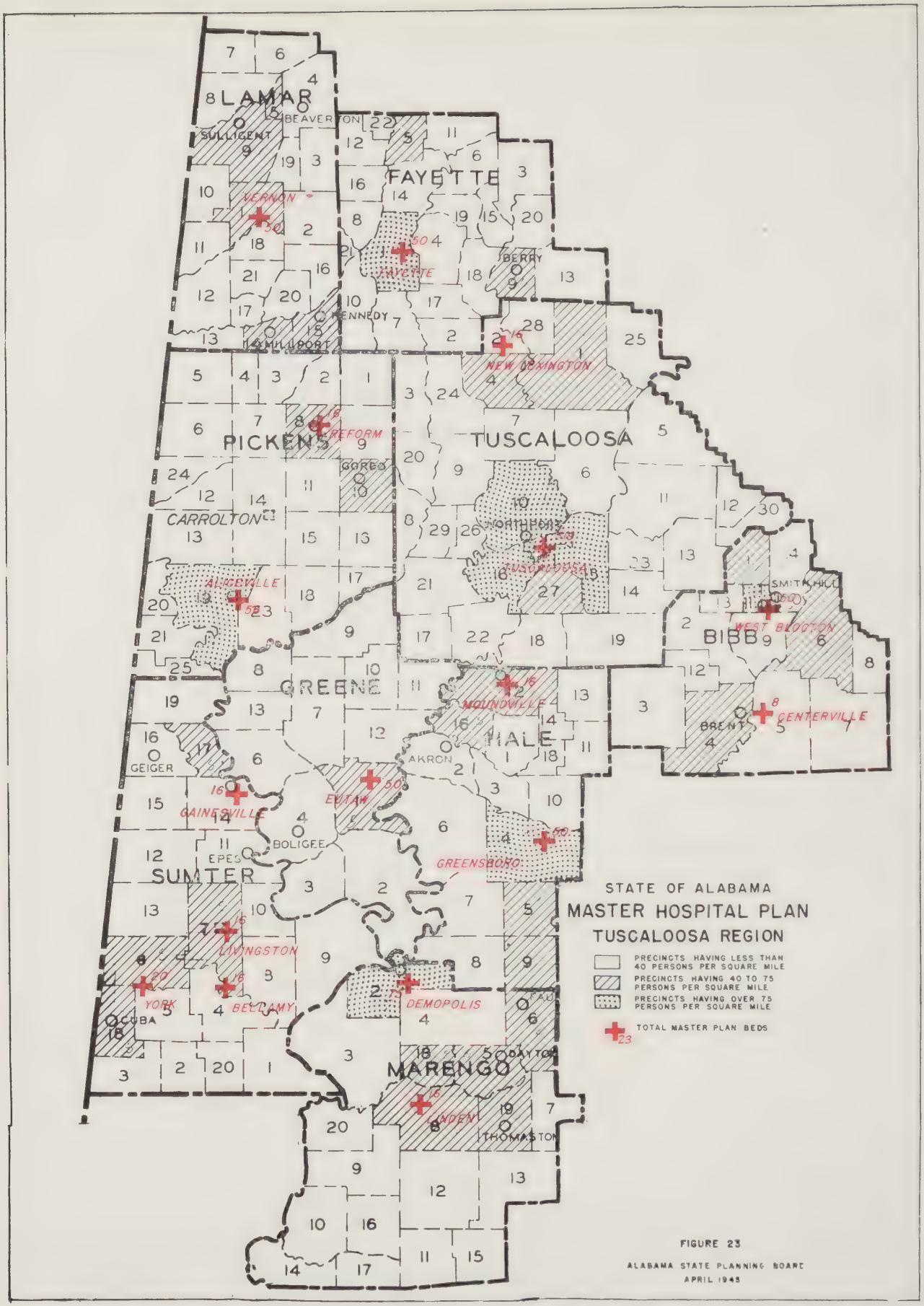

FIGURE 23

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5. **Birmingham Region.** (See Tables 30 and 31, and Figure 24.) In Jefferson County about 10 health centers of 20 beds each should be provided at various points within the county such as Warrior, Littleton, Pleasant Grove, etc., and these sites should be selected after consultation with the local public health authorities. Construction of additional beds for base hospital services should be deferred for a time to permit the medical college program to become established and stabilized. After this has been accomplished, approximately 700 additional beds should be added. It is presumed that the existing beds in Hillman Hospital will be lost as a result of razing this building to make space for the medical college, but the 700 bed increase does not take this into account. If these beds are lost, additional beds probably will be needed in the region, but time will be needed to re-evaluate the problem. The additional 700 beds should probably be spread over several existing institutions and might include a new hospital in an area of the city now not within easy reach of present facilities. A thorough study of all factors is needed prior to reaching final decisions in this matter. At present Jefferson County has approximately 2,131 beds.

In Shelby County a 60-bed district hospital with public health facilities is recommended for Calera, space for public health services at Columbiana, and a 12 to 20-bed health center at Vincent. No facilities are now available.

In Blount County a 60-bed district hospital with facilities for public health services is needed at Oneonta, since the county has no hospital.

In Walker County an additional 55 beds and space for public health services are needed at Jasper, which now has 95 beds, a 12 to 20-bed health center at Dora, and a 12 to 20-bed health center at Carbon Hill.

In Winston County a total of 50 beds should be available and should include space for public health services at Haleyville. Space for public health services should be provided at Double Springs. No facilities are available at present.

Table 30. Hospital Needs in Alabama Counties: Birmingham Region.

County	Population			Hospital Beds							
	Historic		Forecast	Requirements per 1,000 Population							
	1930	1940	1950	2.0 District	0.5 H.C.*	0.5 gional	Base	Total	Existing Beds	New Beds Needed	Master Plan Allocation
BIRMINGHAM REGION	562,130	601,329	637,000	1,274	317	318	1,500	3,409	2,226	1,183	1,161-1,185
Jefferson	431,493	459,930	490,000	980	245	318	1,500	3,043	2,131	912	900
Shelby	27,576	28,962	29,000	58	14	-----	-----	72	0	72	72- 80
Blount	28,020	29,490	30,000	60	15	-----	-----	75	0	75	60
Walker	59,445	64,201	69,000	138	34	-----	-----	172	95	77	79- 95
Winston	15,596	18,746	19,000	38	9	-----	-----	47	0	47	50

*Health Center.

Table 31. Master Plan for General Hospitals and Health Centers, and Estimated Costs: Birmingham Region.

County	Place	Type of Facility	Additional Beds	Minimum Estimated Cost*	County Total
	BIRMINGHAM REGION		1,161-1,185	$5,463,000	$5,463,000
Walker	Jasper	Hospital Beds & Public Health Facilities	55	305,000	
	Carbon Hill	Health Center	12- 20	36,000	
	Dora	Health Center	12- 20	36,000	377,000
Winston	Haleyville	Hospital Beds & Public Health Facilities	50	270,000	
	Double Springs	Public Health Facilities	----	20,000	290,000
Blount	Oneonta	Hospital Beds & Public Health Facilities	60	320,000	320,000
Shelby		Hospital Beds & Public Health Facilities	60	320,000	
	Vincent	Health Center	12- 20	36,000	
	Columbiana	Public Health Facilities		20,000	376,000
Jefferson	Birmingham	Hospital Beds	700	3,500,000	
	Undetermined	Ten Health Centers	200	600,000	4,100,000

*Based on smallest number of additional beds indicated.

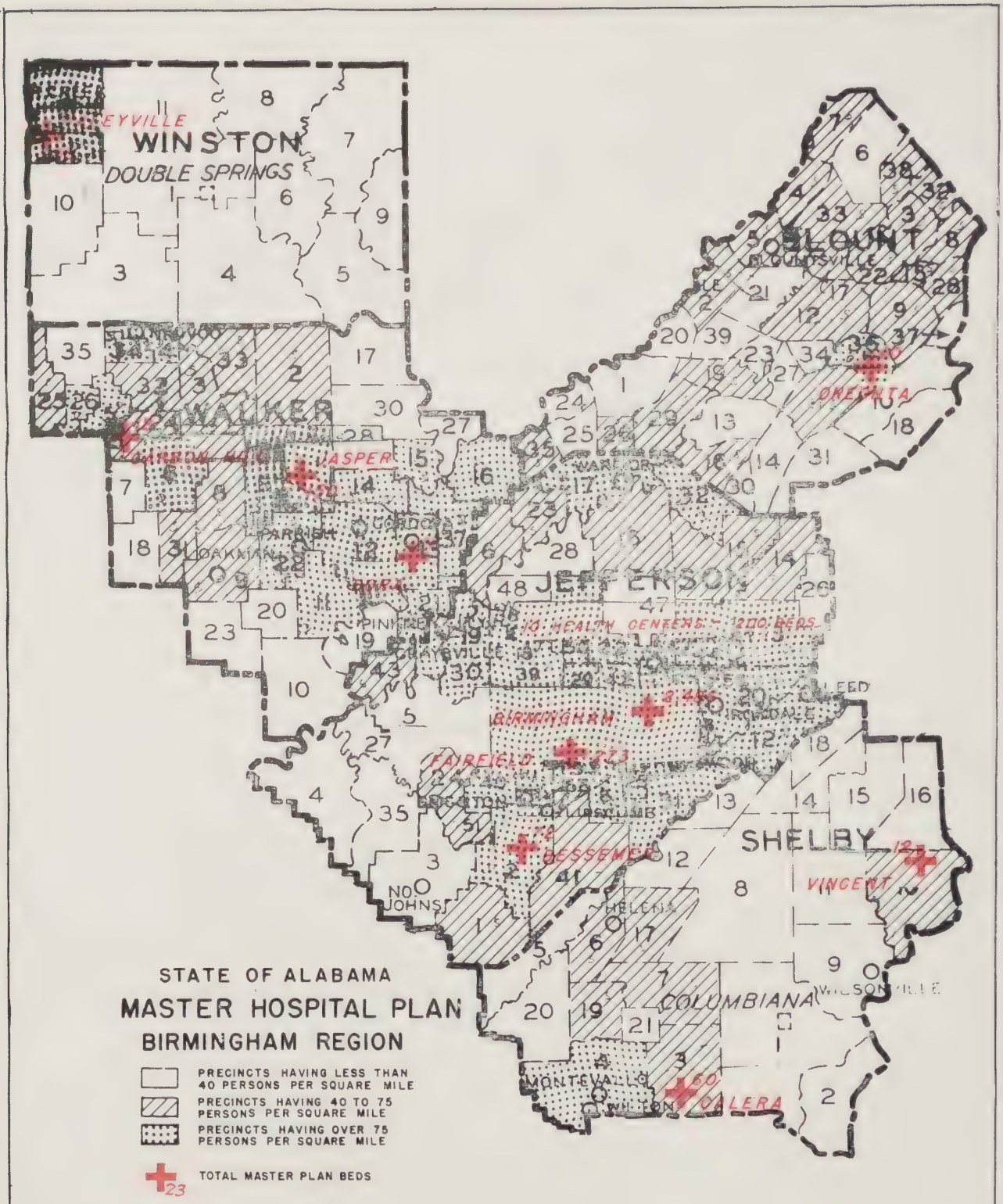

FIGURE 24

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6. **Gadsden Region.** (See Tables 32 and 33, and Figure 25.) In DeKalb County there is needed a 90-bed district hospital at Ft. Payne, and a 20-bed health center at Crossville. Present space for public health services is adequate but no hospital beds are available.

In Marshall County 50 additional beds and space for public health services are needed at Guntersville, and a 12 to 20-bed health center at Arab. The county now has 49 hospital beds.

In Etowah County 200 additional beds to meet regional requirements will be needed at Gadsden and space for public health services. Two additional 16 to 20-bed health centers in outlying sections at a later date are recommended. The county has 165 beds at present.

In Cherokee County a 50-bed district hospital including facilities for public health services is needed at Center. No beds are available in this county.

In St. Clair County 18 additional beds are needed at Pell City as well as space for public health services and a 16-bed health center at Ashville. The county now has 38 beds.

In Calhoun County a 50-bed district hospital with facilities for public health services is needed at Jacksonville or Piedmont and later perhaps additional beds in Anniston as it may supplement Gadsden as a regional center. There are 105 beds now available in the county.

In Cleburne County a 24-bed health center with space for public health services at Heflin, and a 12-bed health center at Ranburne are recommended. No facilities exist at present.

In Talladega County the existing facilities (223 beds) are adequate. Space for public health services at Talladega and Sylacauga should be provided.

In Clay County there should be provided a 24-bed health center with space for public health services at Ashland, since no beds are available at present.

In Randolph County a 12 to 20-bed health center with space for public health services at Wedowee is needed. Roanoke has a 50-bed hospital.

Table 32. Hospital Needs in Alabama Counties: Gadsden Region

County	Population			Hospital Beds						
	Historic		Forecast	Requirements per 1,000 Population						
	1930	1940	1950	2.0 District	0.5 H.C.*	0.5 Regional	Total	Existing Beds	New Beds Needed	Master Plan Allocation
GADSDEN REGION	346,392	376,517	407,000	814	201	203	1,218	630	588	610- 634
DeKalb	40,104	43,075	45,000	90	22	.....	112	0	112	110
Marshall	39,802	42,395	44,000	88	22	.....	110	49	61	62- 70
Etowah	63,399	72,580	83,000	166	41	203	410	165	245	232- 240
Cherokee	20,219	19,928	20,000	40	10	.....	50	0	50	50
St. Clair	24,510	27,336	29,000	58	14	.....	72	38	34	34
Calhoun	55,611	63,319	72,000	144	36	.....	180	105	75	50
Cleburne	12,877	13,629	14,000	28	7	.....	35	0	35	36
Talladega	45,241	51,832	59,000	118	29	.....	147	223	—76	0
Clay	17,768	16,907	16,000	32	8	.....	40	0	40	24
Randolph	26,861	25,516	25,000	50	12	.....	62	50	12	12- 20

*Health Center.

Table 33. Master Plan for General Hospitals and Health Centers, and Estimated Costs: Gadsden Region

County	Place	Type of Facility	Additional Beds	Minimum Estimated Cost*	County Total
	GADSDEN REGION		610-634	$2,966,000	$2,966,000
Cleburne	Heflin	Health Center with Public Health Facilities	24	92,000	
	Ranburne	Health Center	12	36,000	128,000
Cherokee	Center	Hospital Beds & Public Health Facilities	50	270,000	270,000
Marshall	Guntersville	Hospital Beds & Public Health Facilities	50	270,000	
	Arab	Health Center	12- 20	36,000	306,000
St. Clair	Pell City	Hospital Beds & Public Health Facilities	18	110,000	
	Ashville	Health Center	16	48,000	158,000
Calhoun	Jacksonville or Piedmont	Hospital Beds	50	270,000	270,000
Randolph	Wedowee	Health Center with Public Health Facilities	12- 20	56,000	56,000
Talladega	Talladega	Public Health Facilities	—	15,000	
	Sylacauga	Public Health Facilities	—	15,000	30,000
DeKalb	Ft. Payne	Hospital Beds	90	450,000	
	Crossville	Health Center	20	60,000	510,000
Clay	Ashland	Health Center with Public Health Facilities	24	92,000	92,000
Etowah	Gadsden	Hospital Beds & Public Health Facilities	200	1,050,000	
	Undetermined	Health Center	16- 20	48,000	
	Undetermined	Health Center	16- 20	48,000	1,146,000

*Based on smallest number of additional beds indicated.

FIGURE 25
ALABAMA STATE PLANNING BOARD
APRIL 1945

STATE OF ALABAMA

MASTER HOSPITAL PLAN

GADSDEN REGION

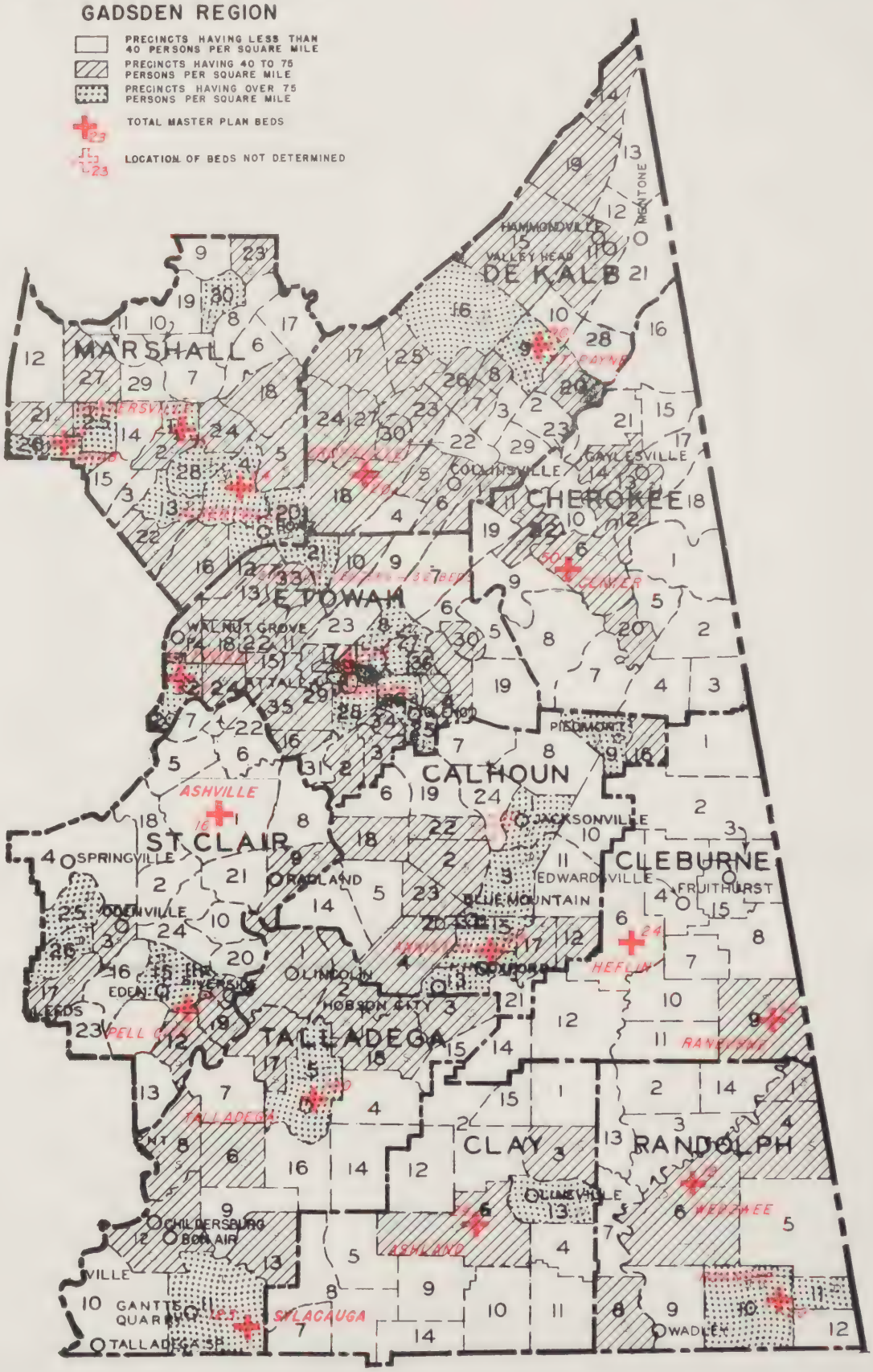
PRECINCTS HAVING LESS THAN 40 PERSONS PER SQUARE MILE

PRECINCTS HAVING 40 TO 75 PERSONS PER SQUARE MILE

PRECINCTS HAVING OVER 75 PERSONS PER SQUARE MILE

TOTAL MASTER PLAN BEDS

LOCATION OF BEDS NOT DETERMINED



7. **Decatur Region.** (See Tables 34 and 35, and Figure 26.) In Jackson County a 70-bed district hospital should be built at Scottsboro with office space for public health services, and a 20-bed health center at Bridgeport. Scottsboro now has a 20-bed hospital.

In Madison County a total of 150 beds should be available at Huntsville with space for public health services, and a 16-bed health center is needed at New Hope. There are 76 beds at present.

In Morgan County an additional 200 beds at Decatur are needed eventually to meet regional requirements. Decatur now has 88 beds. Space for public health services should be provided at Decatur, and a 24-bed health center at Hartselle.

In Limestone County an additional 50 beds and facilities for public health services are needed at Athens. The county has 35 beds.

In Lawrence County an additional 55 beds and facilities for public health services are needed at Moulton, which has a 15-bed hospital.

In Cullman County an additional 80 beds and public health facilities are needed at Cullman. Fifty beds are now available.

In Lauderdale County add 25 beds to the existing 75-bed hospital at Florence, provided this is agreeable. Space for public health services is needed at Florence, and a 20-bed health center at Elgin.

In Colbert County a 24-bed health center should be provided at Cherokee. Sixty-three beds are available in Sheffield.

In Franklin County a total of 50 beds is needed in Russellville including space for public health services. A 20-bed health center should be provided at Red Bay. The county has 32 beds at present.

In Marion County a 50-bed district hospital with facilities for public health services is needed at Winfield, and a 24-bed health center with space for public health services at Hamilton. There is no hospital in this county.

A recapitulation for the seven regions is shown in Table 36 and the master hospital plan for the state is presented on Figure 27.

Table 34. Hospital Needs in Alabama Counties: Decatur Region

County	Population			Hospital Beds						
	Historic		Forecast	Requirements per 1,000 Population						
	1930	1940	1950	2.0 District	0.5 H.C.*	0.5 Regional	Total	Existing Beds	New Beds Needed	Master Plan Allocation
DECATUR REGION	374,631	403,783	419,000	838	208	209	1,255	454	801	770
Jackson	36,881	41,802	44,000	88	22	.....	110	20	90	90
Madison	64,623	66,317	67,000	134	33	.....	167	76	91	90
Morgan	46,176	48,148	49,000	98	24	209	331	88	243	224
Limestone	36,629	35,642	35,000	70	18	.....	88	35	53	50
Lawrence	26,942	27,880	28,000	56	14	.....	70	15	55	55
Cullman	41,051	47,343	52,000	104	26	.....	130	50	80	80
Lauderdale	41,130	46,230	49,000	98	24	.....	122	75	47	45
Colbert	29,860	34,093	37,000	74	18	.....	92	63	29	24
Franklin	25,372	27,552	28,000	56	14	.....	70	32	38	38
Marion	25,967	28,776	30,000	60	15	.....	75	0	75	74

*Health Center.

Table 35. Master Plan for General Hospitals and Health Centers, and Estimated Costs: Decatur Region

County	Place	Type of Facility	Additional Beds	Minimum Estimated Cost*	County Total
DECATUR REGION			770	$3,784,000	$3,784,000
Jackson	Scottsboro	Hospital Beds & Public Health Facilities	70	370,000	
	Bridgeport	Health Center	20	60,000	430,000
Limestone	Athens	Hospital Beds & Public Health Facilities	50	270,000	270,000
Lawrence	Moulton	Hospital Beds & Public Health Facilities	55	295,000	295,000
Colbert	Cherokee	Health Center	24	72,000	72,000
Cullman	Cullman	Hospital Beds & Public Health Facilities	80	430,000	430,000
Madison	Huntsville	Hospital Beds & Public Health Facilities	74	390,000	
	New Hope	Health Center	16	48,000	438,000
Franklin	Russellville	Hospital Beds & Public Health Facilities	18	110,000	
	Red Bay	Health Center	20	60,000	170,000
Marion	Winfield	Hospital Beds & Public Health Facilities	50	270,000	
	Hamilton	Health Center with Public Health Facilities	24	92,000	362,000
Lauderdale	Florence	Hospital Beds	25	125,000	
		Public Health Facilities	----	30,000	
	Elgin	Health Center	20	60,000	215,000
Morgan	Decatur	Hospital Beds	200	1,000,000	
		Public Health Facilities		30,000	
	Hartselle	Health Center	24	72,000	1,102,000

*Based on smallest number of additional beds indicated.

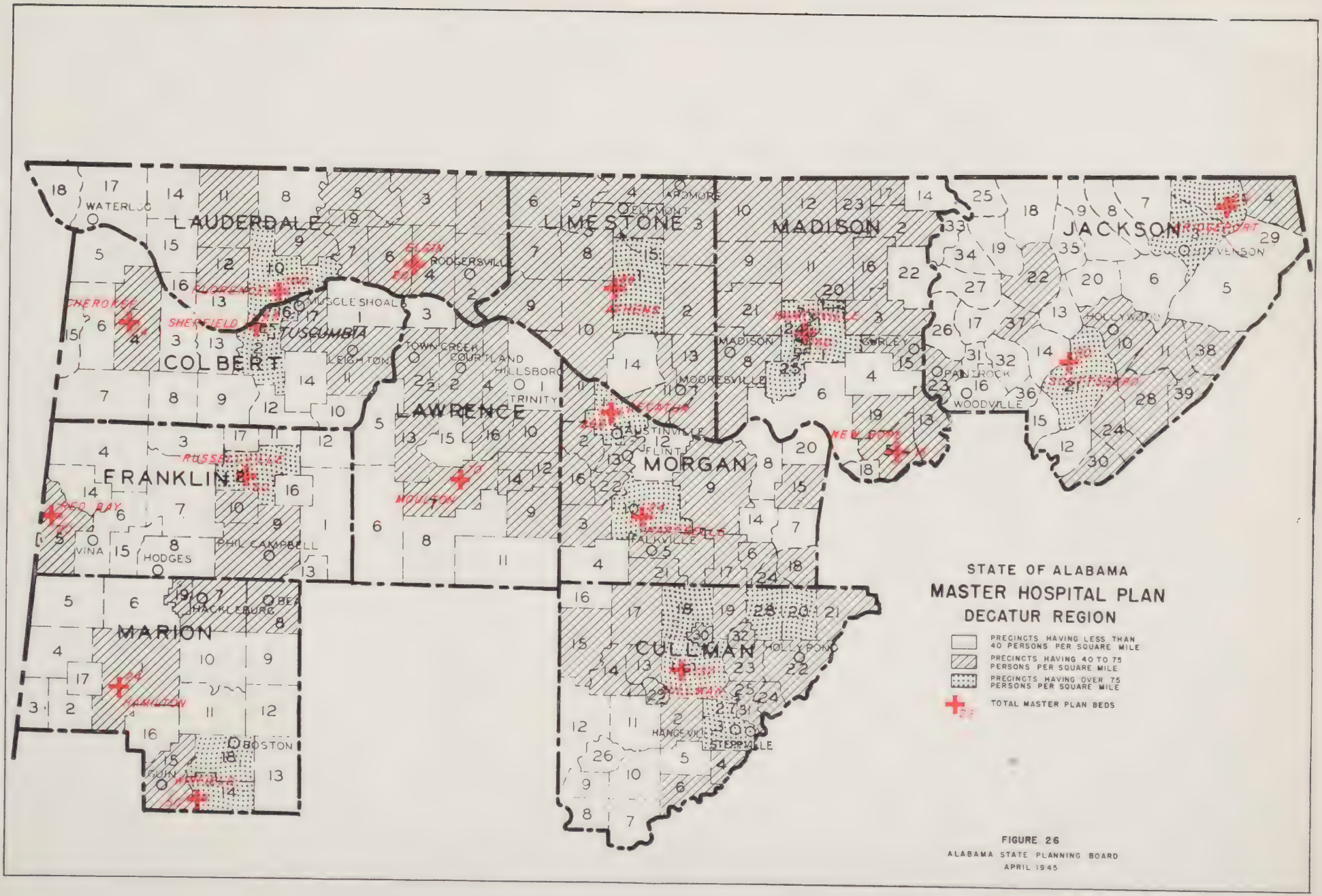


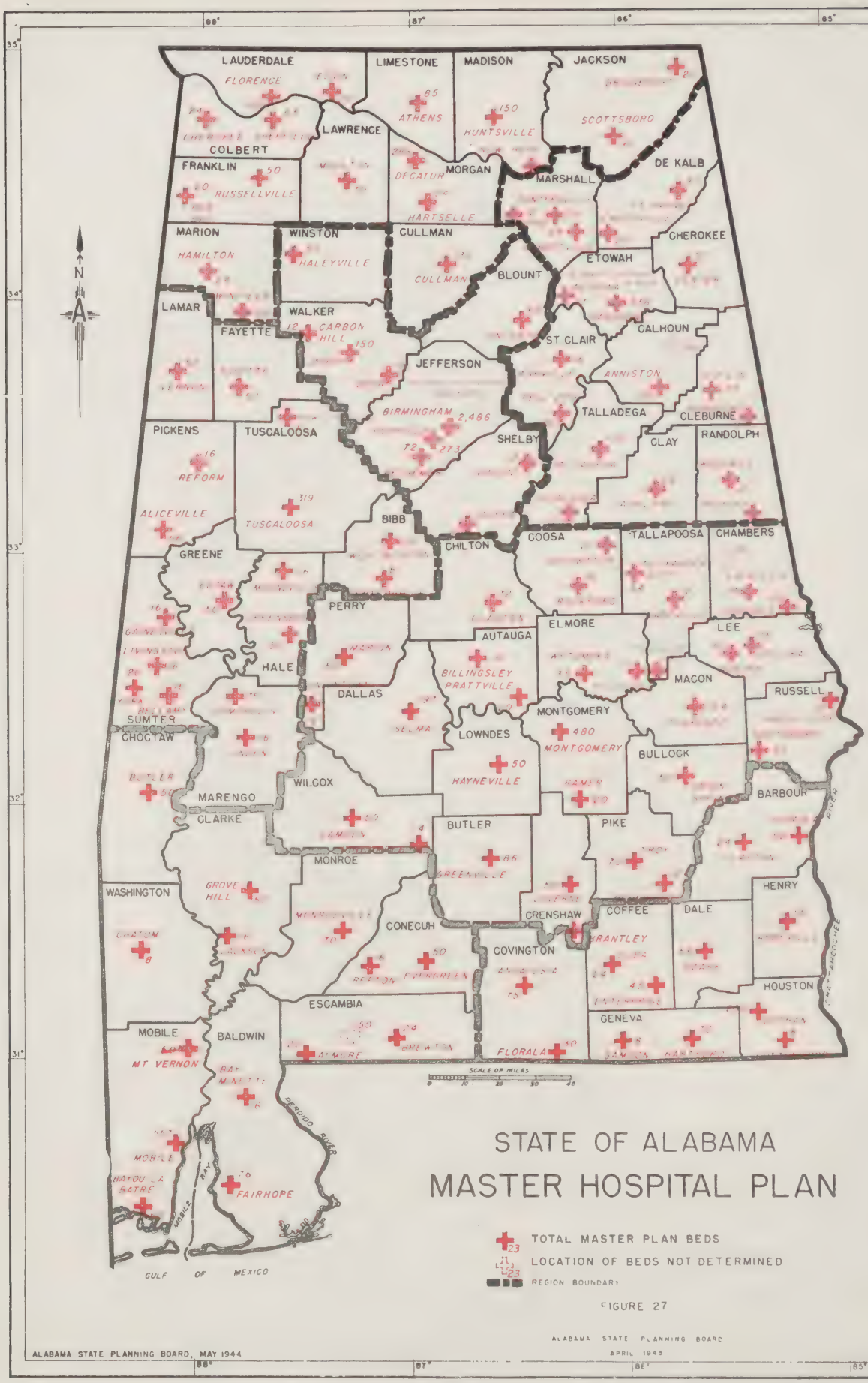
FIGURE 26
ALABAMA STATE PLANNING BOARD
APRIL 1945

Table 36. Alabama Hospital Needs and Master Plan Allocations by Regions.

Region	Population			Hospital Beds							
	Historic		Forecast	Requirements per 1,000 Population							
	1930	1940	1950	2.0 District	0.5 H.C.*	0.5 gional	Base	Total	Existing Beds	New Beds Needed	Master Plan Allocation
ALABAMA	2,646,248	2,832,961	3,000,000	6,000	1,490	1,499	1,500	10,489	5,511**	4,978	4,809-4,959
Mobile	293,008	323,942	368,000	736	183	184	.....	1,103	635	468	470- 486
Dothan	228,371	226,560	229,000	458	115	115	.....	688	407	281	272- 296
Montgomery	586,072	627,834	654,000	1,308	325	327	.....	1,960	941	1,019	904- 954
Tuscaloosa	255,644	272,996	286,000	572	141	143	.....	856	218	638	622- 634
Birmingham	562,130	601,329	637,000	1,274	317	318	1,500	3,409	2,226	1,183	1,161-1,185
Gadsden	346,392	376,517	407,000	814	201	203	.....	1,218	630	588	610- 634
Decatur	374,631	403,783	419,000	838	208	209	.....	1,255	454	801	770

*Health Center.

**Appendix 5 shows a total of 5,633 hospital beds in Alabama. The discrepancy is a result of the fact that in Macon County only 54 of the existing 134 beds have been considered as being open to the public, and in Lee County only 20 of the 62 beds at Alabama Polytechnic Institute have been considered as open to the public.



STATE OF ALABAMA
MASTER HOSPITAL PLAN

TOTAL MASTER PLAN BEDS

LOCATION OF BEDS NOT DETERMINED

REGION BOUNDARY

FIGURE 27

ALABAMA STATE PLANNING BOARD, MAY 1944

ALABAMA STATE PLANNING BOARD
APRIL 1945

Master Plan Capital Costs. In making estimates of the capital cost involved in a construction program based upon the proposed master plan for general hospitals, a unit bed cost of $5,000 for base, regional, and district hospitals has been accepted. The unit bed cost of health centers has been set at $3,000. Office space for local public health facilities has been calculated at $20,000 for counties with less than 45,000 population; $30,000 for counties with a population of 45,000 to 75,000; and $50,000 for counties having a population over 75,000 persons.

It may be that the federal government will provide grants-in-aid to the states for the purpose of constructing hospitals and health centers after the war. It seems likely that these federal grants-in-aid will be based upon equalization principles in determining the amount to be allocated to each state. Such principles take into account both the need of the state for hospital facilities and the ability of the state to finance these facilities on a matching basis. It is considered probable that if federal funds are provided, Alabama will not be required to match dollar for dollar and may not be required to provide more than 25 percent of the cost of the new facilities. Senate bill S-191, introduced by Senator Lister Hill of Alabama, as originally drafted provides $100,000,000 for the first year of a national hospital construction program. A likely guess is that, should such legislation pass, Alabama's share will be approximately $3,000,000 and will require $1,000,000 of state and local matching funds. That Alabama should be ready with a master plan and also should have determined upon a construction sequence for such a hospital construction program in anticipation of such a development admits of no debate.

Rough indicators of a construction sequence have been developed in Table 37. If the beds in the base hospital which are computed upon the ratio of 0.5 beds per 1,000 population for the entire state are excluded, the ratio of 3.0 beds per 1,000 population is the standard of adequacy against which needs are determined. It will be noted that for each region except the Birmingham region the present ratio of beds per 1,000 population is much lower than the standard. Therefore, the Birmingham region will be treated separately because the present ratio in this region is already above 3.0 beds per 1,000 persons. For the other regions, the difference between the existing ratio and the standard of 3.0 against which we are working provides a rough indicator of need which has been termed in the table as a "need index." The relationship of each regional need index to the arithmetic total of the

need indices for the six regions provides a rough indicator which may be used to allocate the funds during the first construction year. This latter indicator called the "allocation factor" is a comparative measure of the need in each region. The amounts to be allocated among the six regions are determined by applying this measure to the estimated $4,000,000 annual program. In the event that the annual program should be smaller or greater than shown here, appropriate adjustments should be made to complete the master hospital plan in a shorter or longer time than the six years indicated in Table 37. It will be apparent from an examination of this table that the four new regional hospitals recommended in the master plan are scheduled for construction in the third year of the program and the facilities in the Jefferson County region are deferred for the first three years. The tentative program as outlined in this table is based upon the central principle that the greatest needs should be met first. A few refinements should be introduced in an actual construction program. For example, one refinement needed would be to develop need and allocation factors at the end of each year and thus obtain new need indices and allocation factors to apply to the next year's program.

Legislation. In order that Alabama may be ready to activate and implement a hospital construction program by taking advantage of federal grants-in-aid which may be provided under proposed federal legislation certain state legislation is necessary. Section 93 of the Alabama Constitution provides that "The State shall not engage in works of internal improvement, nor lend money or its credit in aid of such; nor shall the State be interested in any private or corporate enterprise, or lend money or its credit to any individual, association or corporation." This section will have to be amended before the state can engage in hospital construction. Furthermore, Section 94 provides that "The Legislature shall not have power to authorize any county, city, town, or other subdivision of this State to lend its credit, or to grant public money or thing of value in aid of, or to, any individual, association, or corporation whatsoever or to become a stockholder in any such corporation, association or company, by issuing bonds or otherwise." Since it appears very probable that counties or regions will wish to form non-profit corporations supported by the local governmental units, it will be necessary for a constitutional amendment to be passed to permit such activity.

The Alabama Legislature, in its 1945 session, passed bills providing that constitutional amendments be submitted to the people relative to

Table 37. Estimated Costs and Suggested Six-Year Construction Sequence of Hospitals, by Regions.

Region	Present Bed Ratio	Need Index*	Allo-cation Factor	Year 1st	2nd	3rd	4th	5th	6th	Total
STATE		9.62	100.0	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$3,917,000	$23,917,000
Mobile	1.73	1.27	13.2	528,000	528,000	.....	528,000	528,000	460,000	2,572,000
Dothan	1.78	1.22	12.7	508,000	508,000	.....	356,000	.....	.....	1,372,000
Montgomery	1.48	1.52	15.8	632,000	632,000	1,000,000	632,000	632,000	1,060,000	4,588,000
Tuscaloosa	0.76	2.24	23.3	932,000	932,000	1,000,000	308,000	.....	.....	3,172,000
Gadsden	1.55	1.45	15.1	604,000	604,000	1,000,000	604,000	154,000	.....	2,966,000
Decatur	1.08	1.92	19.9	796,000	796,000	1,000,000	796,000	396,000	.....	3,784,000
Birmingham	.....	.....	.....	.....	.....	.....	776,000	2,290,000	2,397,000	5,463,000

*Need Index equals standard of 3.00 beds per 1,000 population minus existing ratio of beds.

Sections 93 and 94. Alabama voters will have this opportunity of making it possible for the state and local governments to provide better health and hospital facilities in the general election in November, 1946.

In addition to the above constitutional amendments permissive legislation was necessary in order to inaugurate a broad hospital program. Consequently, the 1945 Legislature passed an act authorizing the State Board of Health to construct and operate hospitals, to devise a master plan of hospitals and health centers, to receive federal and any other monies appropriated for health and hospital work, and to license certain types of hospitals. The act also provides that two or more local governing bodies may establish hospital associations which may enter into contractual relationships with the State Board of Health if so desired. Local governing bodies are empowered to appropriate money for construction and operation. Finally, the act provides the machinery with broad latitude, for providing adequate hospital facilities in all areas of the state. Appendix 8 presents this legislation in its entirety.

Tuberculosis Hospitals

The number of hospital beds needed in a community is related to the number of persons who are ill. But, in the case of tuberculosis, the number of known cases is not a reliable index of the extent of the disease as long as persons submit to examinations only voluntarily. It is probable that the amount of active tuberculosis in Alabama is considerably greater than is indicated by records of known cases. A second factor affecting the desired number of beds is the willingness of our people to enter hospitals and their financial ability to do so. Although hospitalization for the tuberculous person is often furnished by local and state government, if the patient is the usual family breadwinner, the loss of his earnings may be a serious matter for the family.

The United States Public Health Service has set a standard of two hospital beds per annual tuberculosis death. Dr. Robert E. Plunkett, General Superintendent of Tuberculosis Hospitals, State of New York, states that, " . . . in New York State, exclusive of New York City, and exclusive of mental, private, and federal hospitals, there is a prevailing ratio of about 2.5 beds per death."[1] Dr. Alton S. Pope, Deputy Commsisioner of Public Health, Massachusetts Department of Public Health,

[1]Letter of March 1, 1944, to Dr. Frank E. Chapman, Acting Director, Division of Tuberculosis Control, Alabama Department of Public Health.

states that since the opening of the first state tuberculosis sanatorium in 1898 the demand for hospitalization has increased from 35 percent in 1925 to 66 percent in 1936. He further states that, "A ratio of one bed per annual death from tuberculosis in the state was reached about 1920 with 3,600 beds. The ratio of two beds per annual death was reached approximately in 1932, and of two and one-half beds about 1938. There are now approximately two and three-quarters tuberculosis beds in Massachusetts for each annual death."[1]

The standard of two beds per annual death is a goal which cannot be achieved immediately, but over a period of years any goal less than this would be insufficient in view of the program of case-finding and education being carried on by private physicians and the Health Department.

In order to be realistic and conservative, an immediate standard of one and one-half beds per annual death is recommended. This suggestion is based upon several factors. First, if the state immediately reached a goal of two beds per death, it is probable that there would be many unoccupied beds in the hospitals because the population is not yet educated to the point of full utilization of tuberculosis hospital facilities. Thus, construction and operating costs would be higher than necessary. Second, there is a possibility that tuberculosis mortality rates will continue to decrease, although specialists have indicated that it is more probable that in the future the rates will level off and no further decline will occur. Should there be a considerable decline, less facilities would be needed. A ratio of one and one-half beds per annual death will provide a fairly adequate program for the next decade, and by then it will be possible to determine further needs.

Hereafter, in this report, estimates of number of beds needed and probable costs will be based on the standard of one and one-half beds per annual death. However, the ratio of two beds per death as a future goal is retained and all tuberculosis hospitals should be constructed so as to permit easy enlargement of facilities. In letting the contract for the architectural plans this feature should be indicated, and no plans should be approved unless they provide for future enlargement.

It has been indicated that the geographical distribution of tuberculosis hospitals in Alabama is unsatisfactory and that large areas of

[1]Letter of February 29, 1944, to Dr. Frank E. Chapman.

the state are not served by any nearby hospital. Consequently, a plan of state tuberculosis hospitals would envisage construction of some new buildings and elimination of some present hospitals. Figure 28 presents a suggested regional plan which contains seven areas, each with one or more tuberculosis hospitals. In this plan the hospitals in Jefferson County, Chambers County, and Morgan County would be retained, but would have to be enlarged. New hospitals would be constructed in the other regions.

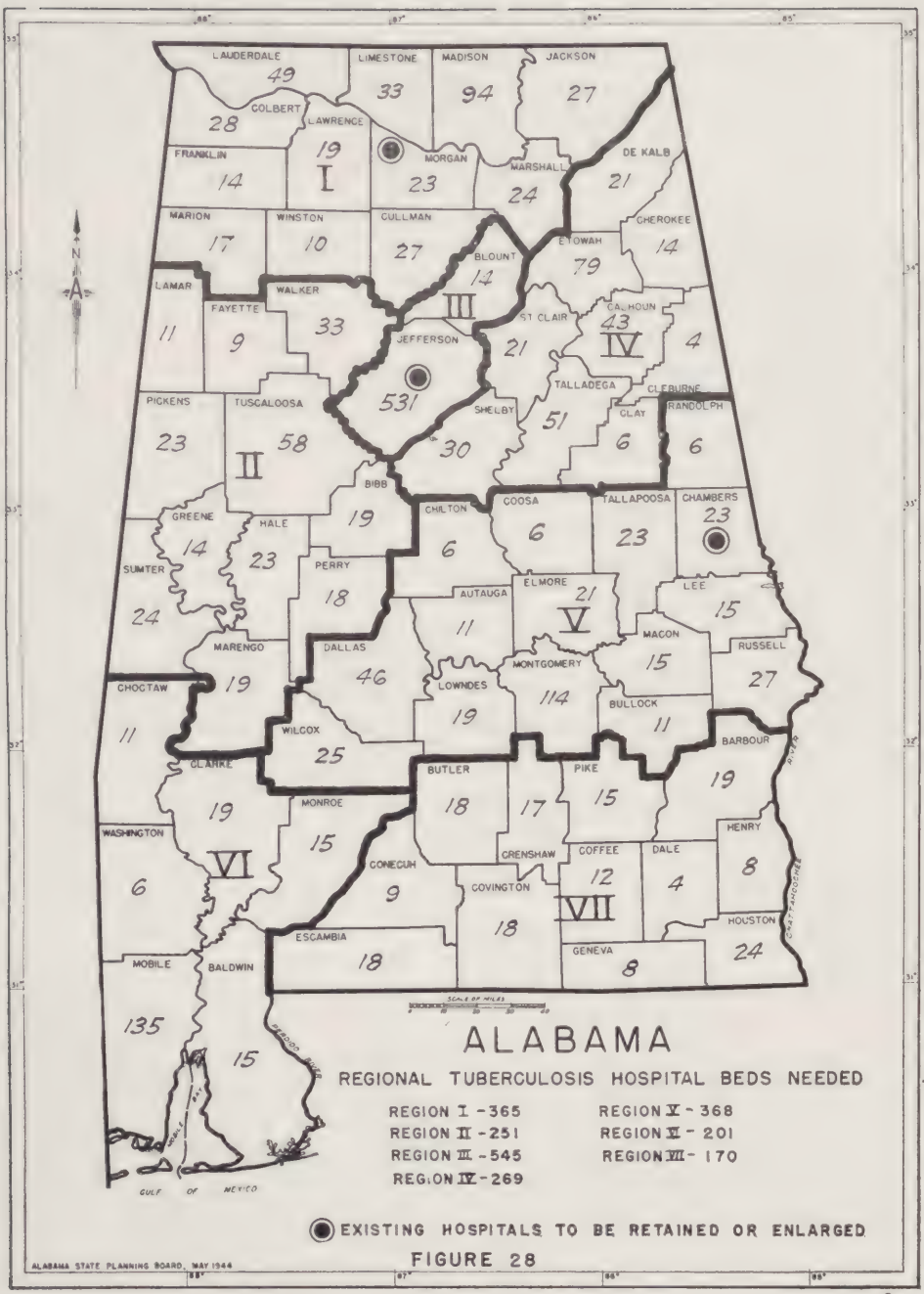
In formulating the boundaries of the seven regions, certain factors were considered, as follows:

1. Location of existing facilities. In the cases of Morgan and Jefferson Counties the regions were mapped with the view of retaining and enlarging present facilities which are relatively modern and capable of being enlarged. The hospital in Chambers County will be retained but not enlarged. Other existing facilities are either too small to retain as economic units or are of such a nature that needed additions would mean construction of completely new facilities. In the latter cases existing equipment could be salvaged.

2. Optimum economic size. It was believed that, for most economical operation, no hospital should be smaller than 150 beds. Suggestions from various state directors of tuberculosis divisions and hospitals range from 150 to 1,000 beds, but most of these physicians agreed that from 200 to 400 beds was an ideal size, and that no economy could be obtained by hospitals larger than 400 beds, whereas a loss in the personal relationship of physician and patient would occur.

3. Distance. Believing that distance from friends and relatives is a significant factor in a patient's mental well-being, regions were formulated so that the distance across would be no greater than approximately 150 miles. Thus, if the hospital were located in the center of the region, no patient would come from a distance greater than 75 miles from his home.

4. Transportation facilities. Existing highways, railroads, and physical barriers were considered with the purpose of facilitating ease of tranportation.



ALABAMA

REGIONAL TUBERCULOSIS HOSPITAL BEDS NEEDED

REGION I - 365
REGION II - 251
REGION III - 545
REGION IV - 269
REGION V - 368
REGION VI - 201
REGION VII - 170

◉ EXISTING HOSPITALS TO BE RETAINED OR ENLARGED

ALABAMA STATE PLANNING BOARD, MAY 1944

FIGURE 28

It will be noted that no suggestions have been made as to actual location of hospitals other than those in Morgan, Jefferson, and Chambers Counties. This procedure was followed so that each region might assume responsibility for determining the best location for its hospital. However, it is suggested that each region should consider facilities for water supply, power, telephone facilities, and location of highways, bus and railroad routes, and living facilities, and transportation for the staff.

In order to determine the number of beds needed per county, the following method was used: the numbers of deaths from all forms of tuberculosis in 1940, 1941, and 1942, were averaged in each county. The three year average was used in order partially to eliminate any undue occurrences which might influence a single year. Using the three year average as a base, the number of beds needed was computed at the rate of one and one-half for each death.

In the regional plan the areas have been numbered as shown on the map, Figure 28. The number of beds needed in each region may be determined merely by adding the number needed in each county within the region. Table 38 presents these data with the number of beds which will be retained and the number to be added. The plan contemplates a total of 2,169 beds in the state as the immediate goal, of which 318 are in existence in institutions which may be retained and enlarged. Thus, the new construction program should be aimed at providing 1,851 new beds as soon as is possible.

Table 38. Tuberculosis Hospital Beds Needed, Beds to be Retained, and Number to be Added in Alabama Regions.

Region	City	Beds Needed	Beds Retained	To be Added
	STATE	2,169	318	1,851
I	Flint	365	83	282
II		251		251
III	Birmingham	545	150	395
IV		269		269
V	Lafayette & Montgomery	368	85	283
VI		201		201
VII		170		170

In Region Number Five which now contains the hospital at Lafayette and one at Montgomery, it is suggested that Batson Memorial, in Lafayette, be retained at its present size, and that the large hospital be built in Montgomery to provide for the remaining necessary beds and for all operating facilities which are not provided at Batson Memorial. Thus, although Batson Memorial would retain its autonomy, it would become an auxiliary hospital for this region.

In considering financial aspects of hospital construction, it should be remembered that costs have increased considerably since war began. Although it is not certain that these costs will decrease after the war to pre-war levels, it seems advisable here to base estimates on pre-war levels.

At present there are only two tuberculosis hospitals, Batson Memorial Sanatorium in Lafayette and Morgan County Tuberculosis Sanatorium in Flint, which were originally constructed for the sole purpose of offering tuberculosis care. The other hospitals have been remodeled from old homes, almshouses, and other types of institutions, and consequently, they can not serve as examples of construction costs. A brief case study of Batson Memorial Sanatorium should prove enlightening.

Batson Memorial Sanatorium, dedicated in 1939, is jointly owned by Chambers and Randolph Counties. At an original cost of $75,000 for construction and equipment, it was built as a Public Works Administration project with 45 percent of the cost borne by the federal government, 55 percent shared by the two counties. Although originally built to care for 47 patients, its average load has been approximately 75 patients. On the basis of the 47-bed size, originally intended, the per bed cost amounted to approximately $1,596. However, this unit cost did not provide for nurses' quarters or for accommodations for the medical director and other staff members. It is a usual procedure to provide both of these.

Operating costs are borne by the state and the two counties as follows: the state furnishes a medical director and a superintendent, and up to one-half of the per patient-day cost, not to exceed $1.00 per day. The remainder of the patient-day cost is borne by the patient, if he is able, or the county, city, or community fund in the community from which he comes. At present the average operating cost is approximately $2.00 per day per patient.

The National Health Conference, convened in 1938, recommended at that time a hospital construction program and suggested that cost of construction and equipment of tuberculosis hospitals should be approximately $3,000 per bed.[1] However, because of lower labor costs and lowered cost of providing adequate heating facilities in the South, the committee submitting this report believes that a realistic estimate would be $1,750 for construction and $250 for equipment per bed. Obviously, the larger the hospital the lower the per bed cost of equipment, to a certain point. Using these figures, an estimate of the approximate cost of the suggested building program has been devised in Table 39.

Table 39. Estimated Construction and Equipment Costs in Alabama Tuberculosis Hospital Regions.

Region	Location	New Beds	Construction	Equipment	Total
	STATE	1,851	$3,239,250	$ 462,750	$3,702,000
I	Flint	282	493,500	70,500	564,000
II		251	439,250	62,750	502,000
III	Birmingham	395	691,250	98,750	790,000
IV		269	470,750	67,250	538,000
V	Lafayette & Montgomery	283	495,250	70,750	566,000
VI		201	351,750	50,250	402,000
VII		170	297,500	42,500	340,000

These figures should be interpreted as probable maximum estimates for the State on the basis of this preliminary study. More detailed estimates of costs should be provided later after further study and consultation with competent architects. The present estimate indicates a total building program somewhat in excess of three million dollars. This may be reduced slightly but not materially by the use of equipment already in existence in our present hospitals.

It is possible to suggest only broad estimates of probable operating costs of the Division of Tuberculosis Control of the state under a 2,169-bed program. For the fiscal year of 1944 the legislature appropriated $185,000 to the Division, of which $111,000 was allocated for the

[1]Interdepartmental Committee to Coordinate Health and Welfare Activities "The Nation's Health," p. 37, Washington, D. C., Government Printing Office, 1939.

subsidy paid to the tuberculosis hospitals on a per-patient-day basis.

Using the first eight months of the 1943-1944 fiscal year as a basis, the annual subsidy would be approximately $142,000, which amounts to $266 per bed. At this rate, the new program of 2,169 beds would entail an annual subsidy of approximately $577,000, or an increase of $435,000 over the present cost. The maximum possible cost of the subsidy would be $1.00 per bed per day, or $791,685 per year for 2,169 beds. Obviously, the subsidy could never reach this maximum because no hospital can remain completely filled every day in the year. Thus, a reasonable estimate of the annual subsidy under the new program would range probably from $577,000 to $791,000.

The state appropriation for general administration of the tuberculosis program, which includes case-finding, fees to physicians and medical directors, costs of x-rays and films, and other expenses, amounts to $74,000 for this fiscal year. It is reasonable to expect that this will also be increased under the suggested program of new hospitals. However, it would not increase in proportion to the increase in beds. The cost of x-raying and films doubtless would be higher, as would various fees, but clerical work and general administrative costs should advance very little.

This study makes no pretense at consideration of methods of financing the program. Possibly a joint state and county arrangement may be considered, although in view of present conditions it appears that the state is better able to bear this cost than the counties. Operating costs should be shared by counties and the state, a method in use at present.

A bill (S-1851), recently introduced by Senator Elmer Thomas of Utah and passed by Congress, authorized the establishment of a Division of Tuberculosis Control in the United States Public Health Service. This division will be allotted $10,000,000 annually to apportion among the states on the basis of population, size of the tuberculosis problem, and the financial needs of the states. This will mean an annual appropriation of several hundred thousand dollars to Alabama for its tuberculosis program. Although such an amount will not go far

toward building the needed hospitals even if the money may be used for construction, it will aid materially in the operation of such hospitals.

Mental Hospitals

It is probable that the post-war period will see an increase in the amount of mental illness among the civil population, the increase being large or small in accordance with the prevailing economic conditions of that period. There will also be a large number of cases resulting from military service. The state should be in a position to care for the civilian cases; cases resulting from military service should be cared for in veterans' hospitals. Table 40 presents the needs of the various state institutions as recommended by Dr. W. D. Partlow.

Table 40. Needs of the Alabama State Hospitals.

Type of Need	Bryce	Searcy	Partlow
ALL NEEDS	$1,050,000	$ 850,000	$ 500,000
Renovation and repair	300,000		
Replacement of buildings	300,000	300,000	
Mental hygiene clinic for preventive services	150,000		
Additional beds	300,000	300,000	500,000*
Kitchen and dining rooms		250,000	

*Includes home for attendants.

The chief problem of all these institutions is their low per capita maintenance support, which is set by law at a minimum of $3.00 and a maximum of $4.50 per week. At present the hospitals are drawing the maximum, and this is the only appropriation received. It must care for costs of personnel, materials for clothing, bedding, equipment, lights, water, fuels, and all other costs. This low maintenance allowance is a major factor contributing to the present shortage of personnel.

Nursing Homes

From the information presented by the county departments of public welfare, reports from individuals, and from governmental agen-

cies having responsibility for the chronically ill adults, there seems to be a great need for several strategically located public nursing homes or institutions which could care for the bedridden who are too old and senile for care in private homes, but are not subjects for care in State Hospitals for the insane or in tuberculosis sanatoria. The problem of care for these chronically ill persons is both medical and social, and any plan developed should have the joint participation of welfare and medical authorities.

The determination of the number of beds needed may be obtained by an actual count of persons in need of such care. Table 41 presents the number of such persons in the regions as of September, 1944. Because of the abnormally prosperous conditions of that year, these figures may be conservative.

Table 41. Chronically Ill Persons Known to be in Need of Public Care, By Regions, September, 1944.

Region	Chronically Ill and Beds Needed	Estimated Cost
ALABAMA	3,241	$6,482,000
Mobile	513	1,026,000
Dothan	209	418,000
Montgomery	570	1,140,000
Tuscaloosa	349	698,000
Birmingham	502	1,004,000
Gadsden	397	794,000
Decatur	701	1,402,000

At an estimated per-bed cost of $2,000, the goal of 3,241 nursing home beds would cost six or seven million dollars, as indicated in the above table. It is recommended that these nursing homes be constructed and maintained by the state because of the nature of the nursing home problem. For convenience of the patients, and in order to promote efficiency of operation, it is suggested that one such hospital be located in each region at the site of the regional general hospital.

For the immediate post-war period, and to meet the present emergency, it is suggested that the first nursing homes to be constructed should be in Birmingham, Montgomery, and Decatur, in that order.

Chapter VI

INCOME AND MEDICAL CARE

Although the medical profession has always demonstrated a willingness to serve the indigent with no thought of financial reward, it is nevertheless influenced considerably by opportunities for remuneration. In selecting a location for practicing his profession, the average physician is concerned primarily with the opportunity of earning a living and only secondarily with the demands for medical care. Furthermore, as medicine has developed new diagnostic and therapeutic measures, the cost of medical practice has increased and the average physician has a heavy financial overhead which must be paid before he earns anything for himself.

Similarly, modern advances have increased the cost of hospitalization. The original cost of the modern hospital is no small item but the cost of operation over a few years will soon equal the original cost. Thus to operate successfully it must have a secure source of income. Regardless of its determination to be of service to a community, it must compensate its staff regularly and pay for supplies and utilities just as any private individual does.

Thus, despite the most altruistic motives of the profession and the institutions providing medical care, adequate medical care in any area is dependent upon the income which it must secure from that area and the available income of the area will determine the amount which will be available for medical services.

In considering relationships between income and medical care, it is necessary to consider the total income of the area from which income for medical care must be derived and the income of the individual and its relation to problems of medical care.

The per capita income for Alabama in 1940 was $266 compared to the national per capita income of $579.[1] Because of the increased employment this figure had risen by 1942 to $480, but the national average soared to $852 so that, in relation to the entire nation, Alabama,

[1]U. S. Department of Commerce, **Survey of Current Business**, June, 1943.

even in 1942, had a per capita income of only a little more than half that existing on a national level. If national income decreases in the postwar period, it is reasonable to expect a corresponding decrease in Alabama.

Alabama's farm families are poor as compared to the farm families of the nation. In 1939 the per capita gross farm income in Alabama was the nation's lowest. During 1939 it was $128 compared to the national per capital farm income of $325. Although Alabama's per capita gross farm income rose because of the heavy demands of war to an estimated $261 in 1943, an increase of $133, the national level had in the same period increased to $713. In 1939, 80 percent of all farm families in half the counties in Alabama had a gross income of less than $600. As a further indication of the disparity between rural and urban income, Table 42 demonstrates the variation in wages and salary income received in 1939 by all experienced persons in the labor force in 1940. Figure 29 is based on this material and provides graphic evidence that most farm workers employed for wages or salaries received less than $100 a year, whereas in urban locations the number of workers receiving less than $100 per year were fewer than those receiving $1,000 or more.

Table 42. Wage or Salary Income Received in 1939 by all Experienced Persons in Alabama in the Labor Force in 1940.*

Wages or Salary Income in 1939	Percent Distribution of Experienced Labor Force in Various Income Groups (Wage or Salary) in 1940		
	Urban	Rural Non-Farm	Farm
0-$ 99	18.6	20.4	59.9
100- 199	9.5	10.9	9.4
200- 399	14.7	17.3	8.1
400- 599	11.2	13.3	3.5
600- 799	11.5	12.7	2.2
800- 999	6.9	6.9	1.0
1000 and over	23.9	14.2	1.7
Unreported	3.7	4.3	14.2

*U. S. Census, **Sixteenth Census of the United States**, 1940, "Alabama Population," Third Series, Table 15.

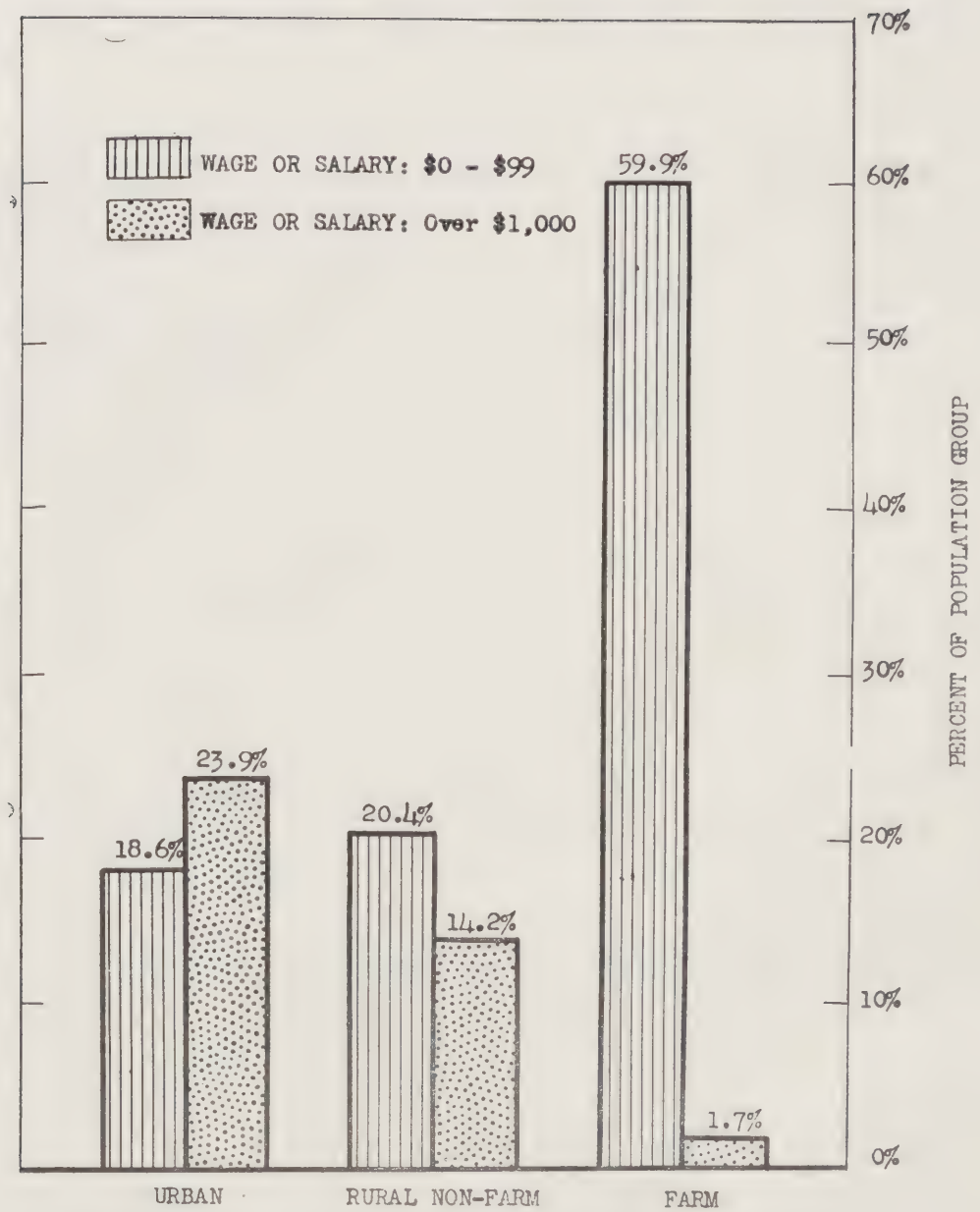


FIGURE 29. WAGE OR SALARY RECEIVED BY URBAN, RURAL NON-FARM, AND FARM LABORERS, 1939.

There is no recent source which includes data on per capita income on the county level. However, **Sales Management** magazine has computed what is termed "effective buying income" for each county.[1] This includes income from all sources such as wages, salaries, dividends, interest, and miscellaneous items, but does not include products consumed by the producer. As an index of a person's ability to purchase goods and services, this appears to be reliable, and it permits comparison of counties and states.

Appendix 7 contains information relative to effective buying income and the number of physicians available in the various counties in Alabama in 1940. It may be noted that in only nine counties[2] is the effective per capita buying income above the average for the state. These nine counties with only 39 percent of the population of the state state had 64 percent of the effective buying income. The average per capita buying income of these nine counties was $399 as compared to $141 for the other fifty-eight counties. These same nine counties had 968 physicians; the remaining fifty-eight had 910. There were 1,132 patients per physician in the nine counties; 1,909 patients per physician in the fifty-eight. Of the general hospital beds listed in the registry of the American Medical Association, 2,785 were located in the nine wealthy counties, only 1,412 in the other fifty-eight. (See Figure 30.) The relationship between the income and the availability of medical care is evident. Note that, despite the comparative wealth of the nine counties, none approaches the national level. One of the reasons for the more favorable conditions of medical care on a national level should be evident from this.

It may be concluded that the unfavorable status of medical care in Alabama is to a considerable extent a reflection of the low per capita income level of the state. This is fundamentally responsible for the insufficient number of doctors, dentists, nurses, and public health workers, and the lack of medical facilities such as hospitals, clinics, and adequate health department quarters.

Ignorance, malnutrition, poor housing, and inadequate sanitary facilities are almost inseparable from poverty and bring with them ill-

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[1]**Sales Management**, Volume 48, No. 48, April 10, 1941. Used by permission of Mr. Philip Salisbury, Executive Editor, Sales Management, Inc.

[2]Calhoun, Dallas, Etowah, Jefferson, Lauderdale, Madison, Mobile, Montgomery, and Tuscaloosa.

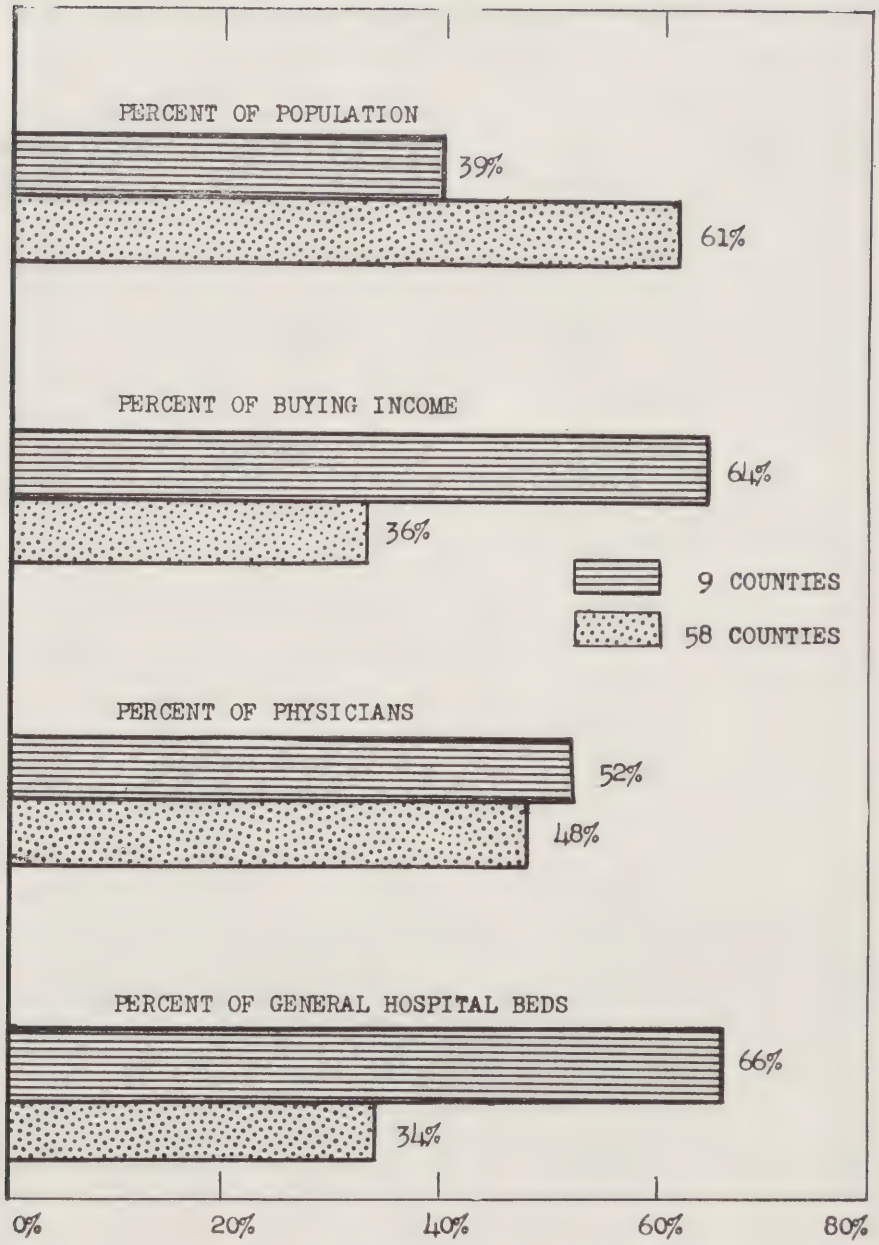


FIGURE 30. NINE ALABAMA COUNTIES WITH HIGHEST EFFECTIVE BUYING INCOMES COMPARED WITH REMAINING FIFTY-EIGHT COUNTIES

ness or ready susceptibility to illness. Provision of medical care after illness occurs is not the solution to the problem. However, if the physicians of Alabama were given the same facilities and opportunities as physicians in the wealthier states, there is every reason to believe that the medical care thus made available would vastly improve the health of Alabama's citizens.

Although it is evident that there is a definite relationship between the per capita income and the quality and quantity of medical care available, the per capita income is an average figure. Similarly it is possible to estimate an average cost for medical care. In actuality, however, the costs of medical care are not spread evenly over the entire population, and risks of incurring heavy medical expenses are unpredictable. This uneven incidence of the risk is a particularly serious problem in a population with a low per capita income because the margin between total earnings and expenditures for basic needs is very small.

There is apparently a direct relationship between the cost of living and expenditures for medical care. This is demonstrated by Figure 31 which reveals that, regardless of the living expense, the share spent for medical care in the income groups studied remains about the same.

Not only is there an increased expenditure for medical care as income increases but there is an increase in the proportion of families incurring the expense. This is graphically shown by Figure 32 illustrating the percentage of families with expenditures for medical care in two income groups. This does not indicate a greater amount of illness among the high income families, but instead, the difference in the amount of care which the families can afford to purchase. This is indicated by the fact that the higher income groups utilize physicians little more than do low income groups but make far more use of dentists and hospitals. Care by a physician, the first step in medical care, is about all that the low income family can afford, and modern medicine with all of its facilities and services is utilized for the most part only in an emergency. This tendency is evidenced by Figure 33 which demonstrates that, though the amounts spent for medical care increase with income, the proportion spent for certain items decreases. Thus, a decreasing proportion is spent for physician's services, medicines and drugs and refractions and eyeglasses but an increasing amount is spent for hospital care and private duty nurses.

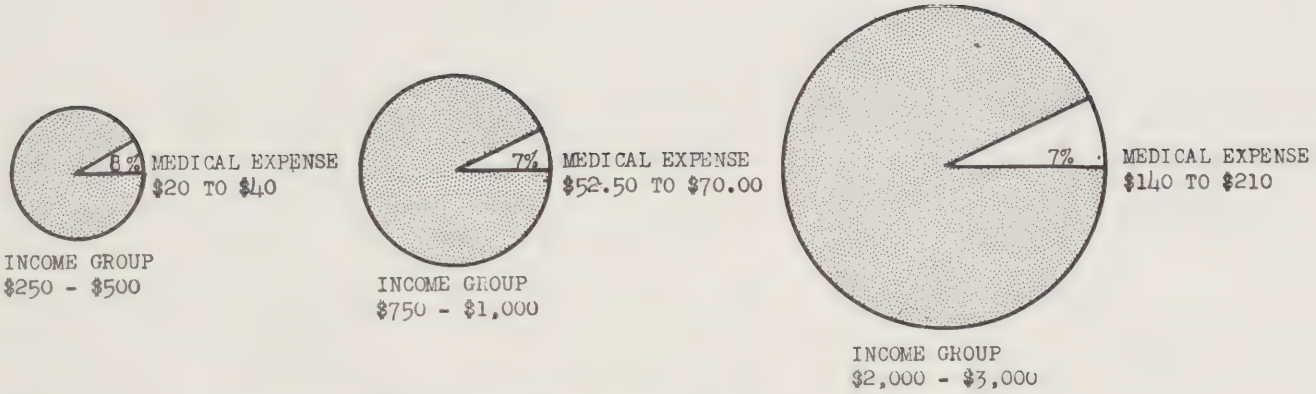


FIGURE 31. PROPORTION OF LIVING EXPENSE USED FOR MEDICAL EXPENSES.

(SOURCE: PENNOCK, J. L. AND ANGLE, G. M., WHAT FAMILIES SPEND FOR MEDICAL CARE, WASHINGTON, D. C., U. S. DEPARTMENT OF AGRICULTURE, 1944.)

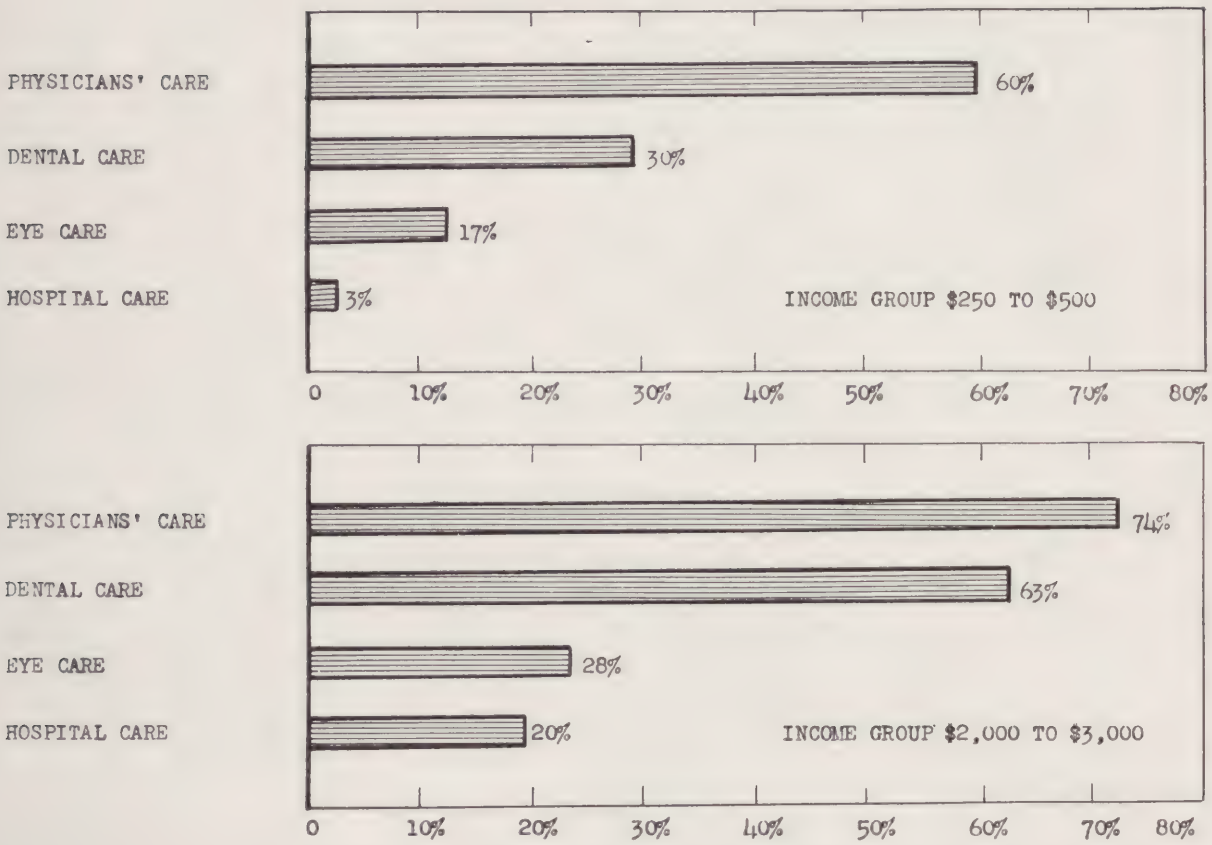
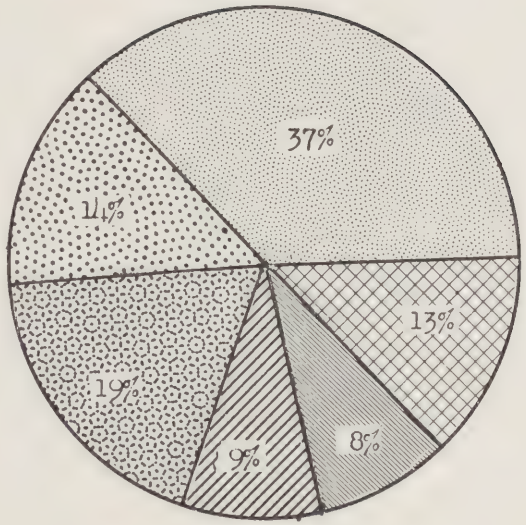
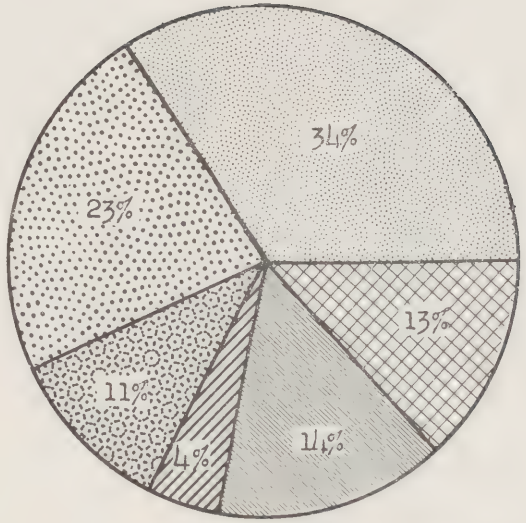


FIGURE 32. PERCENTAGE DISTRIBUTION OF MEDICAL EXPENSES BY TWO INCOME GROUPS.

(SOURCE: PENNOCK, J.L., AND ANGLE, G.M., WHAT FAMILIES SPEND FOR MEDICAL CARE, WASHINGTON, D.C., U.S. DEPARTMENT OF AGRICULTURE, 1944.)



INCOME GROUP $250 - $500



INCOME GROUP $2,000 - $3,000

PHYSICIANS' CARE

DENTAL CARE

HOSPITAL CARE

EYE CARE

MEDICINES AND DRUGS

ALL OTHER

FIGURE 33. HOW THE MEDICAL DOLLAR IS SPENT BY FARM FAMILIES.

(SOURCE: "WHAT FAMILIES SPEND FOR MEDICAL CARE," U. S. DEPARTMENT OF AGRICULTURE.)

Medical expenditures can be classified as either normal or abnormal. Normal expenditures are those incurred in preventive care and the treatment of minor illnesses or injuries. The vast majority of the families in any one income group will have only this type of expenditure, and the amount spent by them for medical care will be below the average for the group. A small minority of families will have abnormal illnesses of the catastrophic type and these families will incur expenses far above the average for the income group. It is the family in which the illness occurs that must pay the bill. Figure 34 demonstrates the increased cost of care when hospitalization is required. Note that families having expense for hospital care spent three times more for medical care than did those with no expense for hospital care.

It is evident that the inadequacies of medical care in Alabama bear a close relationship to the low per capita income of the state. It also may be concluded that the uneven distribution of medical costs, in itself a serious problem, is greatly accentuated by the inadequate income of large portions of the population. That these factors have resulted in an insufficient supply of professional personnel and a dearth of medical care facilities is deplorable but not inexplicable.

Alabama has a vicious circle—health services are inadequate because the income level is low, and the income level is adversely affected by the health condition of the people. This circle must be broken at some point. The master hospital plan, described in Chapter V, if attained or even if partially attained, will be effective in making a beginning in breaking this circle. A further need is to raise the productivity of agriculture and industry in order to raise income levels. This increased income would pierce the circle at a second and vulnerable point.

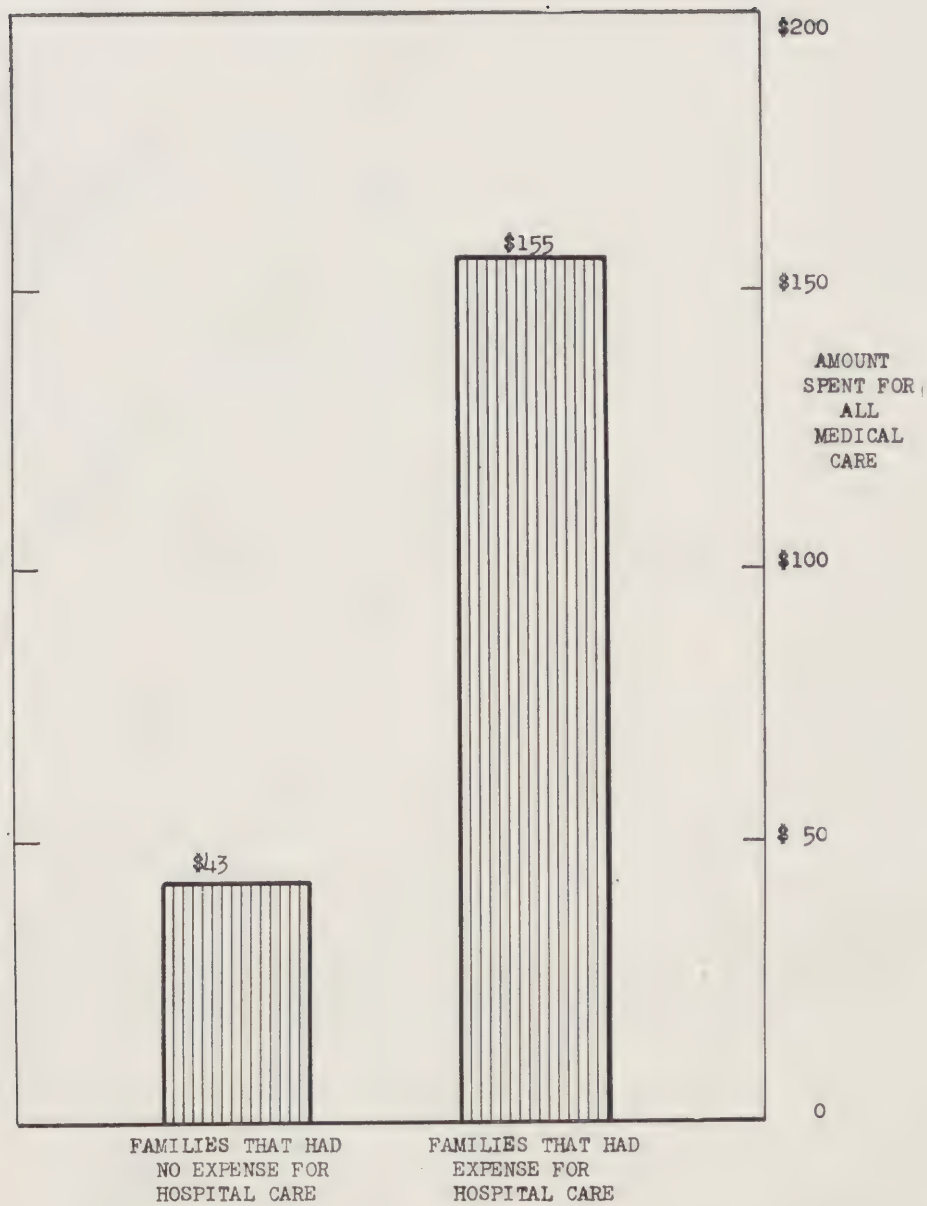


FIGURE 34. MEDICAL EXPENSES FOR FAMILIES WITH AND WITHOUT HOSPITAL CARE.

(SOURCE: "WHAT FAMILIES SPEND FOR MEDICAL CARE," U.S. DEPARTMENT OF AGRICULTURE.)

Chapter VII

COSTS OF MEDICAL CARE

Medical care, inadequate as it is in Alabama, is still a large item of family expenditure. To provide minimum adequate medical services, including dentistry, proper medicines, hospital care, and other necessary items would cost the people of Alabama somewhat more than is now being spent for these services. The cost is high but it is cheaper than poor health.

Illness and hospital care often come to the family as catastrophic occurrences which cannot be paid for out of current income or savings, and often which can never be paid for by the individual. In such cases, the doctor, the hospital, and possibly the nurse and druggist, lose, or wait long periods for payment. However, such bills are paid by someone whether it be the doctor or hospital, or a charity organization, or the community. Every medical service costs money regardless how, or by whom, paid. Few families carry hospital insurance, and even fewer carry insurance which will pay a doctor's bill. Lack of medical service costs the community a very high price in lowered productivity and exacts a very harsh payment in terms of human distress.

It is not possible to make accurate estimates of the costs of proper and adequate, though minimum, medical care, but crude estimates can be made which will point up the problem. Table 43 presents such estimates based upon a population of 3,000,000. The minimum cost of hospital room and board in wards has been estimated at $4.00 per day. This figure may appear to be too low, but it must be remembered that this is an estimate for publicly operated, non-profit institutions which need not include a capital recovery or profit factor in figuring costs. It has been assumed that the number of hospital beds will reach the master plan recommendation of 10,320, the number of doctors and dentists will reach standards of one per thousand and one per fifteen hundred population respectively, and that professional gross incomes will be $8,000 for doctors and $6,000 for dentists. Based on these assumptions, the total costs of minimum medical care would amount to $62,000,000. This cost does not include provision for eyeglasses, appliances, private nursing, and other specialized services.

Table 43. **Estimated Costs of Minimum Medical Care in Alabama.**

Item	Annual Cost
TOTAL COSTS	$62,000,000
Hospital room and board (10,320 beds, 70% occupancy, $4.00 per day)	10,500,000
Other hospital expenses (anesthesia, dressings, laboratory expenses, medicines, etc.)	5,000,000
Prescribed medicines	10,000,000
Physicians (3,000 practitioners, $8,000 gross income)	24,000,000
Dentists (2,000 practitioners, $6,000 gross income)	12,000,000

This estimate of $62,000,000 would amount to approximately $21 per capita, or $86 per family each year. There is no doubt that many families would welcome the opportunity of receiving these essential elements of medical care for only $86 per year. However, there are many families which would be unable to afford even this amount. In 1939 the entire income of 62.4 percent of Alabama's families was less than $500 per year, and 86.5 percent of our families had incomes of less than $1,500 per year.[1] To these families even $86 per year would be a burden.

In 1941 the total income of persons in Alabama was approximately $1,037,000,000. Using this as a possible postwar estimate of total income, minimum care would consume less than six percent of our income, which is a small part to pay for good health. Should any plan be worked out whereby provisions would be made for medical care for all persons at these estimated costs, it is apparent that the government would still have to make provision for the medically indigent or the persons able to pay would have to pay an unusually heavy share.

Methods of Paying for Medical Care. Minimum medical care has been estimated at $62,000,000 per year in Alabama. There are at least four possible categories of payment methods, and in each category there are numerous variations. These four broad methods are suggested here without recommendation for the purpose of stimulating further thought and discussion.

[1]U. S. Bureau of the Census, **Sixteenth Census of the United States,** 1940, "Population and Housing, Families, General Characteristics," Table 34, p. 157.

1. Pay as at present. The present method is one whereby neither the doctor nor the hospital is guaranteed payment by the patient. Because some patients fail, or are unable, to pay their medical bills, others must pay a greater amount. Many persons do not receive adequate care because they cannot afford such care and will not accept it as charity. It should be remembered that a self-supporting person may easily be a medically indigent person. Furthermore, a small percentage of families pays for approximately half of all medical costs because the occurrence of sickness is unpredictable.

2. Voluntary insurance. This is merely an extension of the present system, and until now it has not proven adequate. The Hospital Service Corporation of Alabama served 135,644 persons in 1944, or approximately 5 percent of the population, at the end of its ninth year of existence. Although a non-profit organization, it must set its premiums according to actuarial principles. For the 78.5 percent of Alabama's families who earned less than $1,000 in 1939, these premiums are in all probability too high for them to pay. Such insurance might be extended to provide greater coverage, but some plan would have to be worked out for the low income group.

3. Compulsory insurance. This plan has at least two undesirable qualities: the factor of compulsion which should be eliminated if any other plan will work, and the difficulty of administration in view of the large number of farmers, domestic workers, migrant laborers, and others not regularly employed.

4. Taxation. Education, at first looked upon as a purely private function, has long been accepted as a public service. It is conceivable that health and the provision of medical services might be looked upon as a public obligation to be supported, at least in part, by public funds. Such a plan would not necessarily eliminate the private practioner nor the private hospital but it would underwrite a part of his and the hospital's services.

Alabama's most important resource is its people, and the problem of medical care is of vital importance in the conservation of this resource. However, this resource is not only important to the state, but is also of national importance. The rate of rejections of men by the Selective Service in the present emergency sharply points to the fact

that health is of vast national concern. The underwriting of adequate medical care is therefore a matter for federal, state, and local cooperation, and by both the public and private sectors of our economic society. The intent of this report is not to promote any plan but merely to suggest that consideration be given to some method which will tend to equalize the costs of minimum services and make possible the obtaining of adequate care by all persons regardless of their ability to pay. Only by achieving such a goal will the health of Alabama's population be materially improved.

Chapter VIII

SUMMARY AND RELATED PROBLEMS

This report has attempted to set forth conditions as they exist in Alabama. The more salient of these conditions may be summarized as follows:

1. The death rate in 1940 was 10.4 in Alabama as compared with 10.8 in the nation.

2. The infant mortality rate in 1941 was 58.7 per thousand live births in Alabama as compared with 45.3 in the nation.

3. A large majority (70 percent in 1942) of all births in Alabama occur outside of a hospital: in the nation only 32 percent of births were outside of hospitals.

4. In 1940 Alabama had 1,878 physicians, or one for every 1,508 persons, whereas a recognized standard is one physician per 1,000 persons.

5. In 1940 there were only 636 dentists, or one to every 4,454 persons whereas the standard is one dentist to every 1,500 persons.

6. There are now 5,633 general hospital beds, or 2.07 beds per thousand population, whereas a minimum standard is 3.5 beds per thousand, and the recognized standard is even higher. Twenty-five counties have no hospital facilities within their borders.

7. In 1942 Alabama possessed 0.39 tuberculosis hospital beds per annual tuberculosis death whereas the accepted standard is 2 beds per annual death.

8. There is a need for 700 new beds for the care of the mentally ill in order to provide minimum service.

9. Alabama has no public nursing homes for the chronically ill.

Analysis indicated that the lack of sufficient doctors and dentists was related in part to the low income level of Alabama's people, and in part to lack of hospital facilities. It appeared that the construction of more hospitals would serve the two-fold purpose of providing more adequate hospital facilities and of attracting more physicians and nurses, and possibly dentists. Consequently, a master hospital plan was devised which took into account existing facilities and population density in recommending the location and size of proposed new public hospitals. Crude estimates of construction costs have also been prepared, and indicate a six-year program at $4,000,000 per year, of which approximately $3,000,000 per year may be available from the federal government under the Hill-Burton (S-191) bill if it is passed. This master plan proposes bringing the number of general hospital beds up to 10,320, and of tuberculosis hospital beds to 2,169. It also recommends the provision of 3,241 beds for the chronically ill.

The report has also touched on the problem of the low income of the people and the relationship of this low income to the provision of medical care. An estimate of $62,000,000 annual cost of a minimum medical care program raises the question of methods of financing such a program, and various means have been suggested without formal recommendation.

The subject of health and medical care is exceedingly broad, and comprehensive coverage would require a voluminous report. The fact that this report has not touched upon many related problems is not an indication that these problems are unrecognized. It merely means that the provision of adequate hospital care has been considered as the central and most pressing problem and therefore the one which should receive the greatest immediate attention. It seems fitting here to call attention to other important phases of health and medical care and to suggest further study of these related phases.

As Alabama becomes more and more industrialized greater attention must be devoted to industrial diseases, occupational hazards, and the related problems of sanitation, stream pollution, industrial safety, and other problems resulting from industrialization.

Housing is another problem significantly related to health. In Alabama, in 1940, only 34 percent of the dwelling units had running water within the unit, and 17 percent had no water supply of any kind within 50 feet of the house. In the same year, 57 percent of the dwell-

ing units had an outside toilet or privy, and 14 percent had no toilet or privy inside or outside the house. Only 24 percent had private flush toilets. Seventy-five percent contained no bathtub or shower. Such conditions are obviously unconducive to proper sanitation and good health. This is again largely an economic, but in part, an educational problem.

A final problem is that of health education. The population of Alabama needs greater education in nutrition, sanitation, and elementary health precautions and safety-first measures. This is a problem that should combine the resources of health departments and education departments.

All of these problems—the broad problem of health and medical care—are continuing; they cannot be solved and forgotten. The people of Alabama must never give up the fight against disease and death. Health is a problem that should combine the resources and efforts and the cooperation of public and private agencies and individuals on local, state, and federal levels. The excellent work being done by health departments on all levels, by hospitals and physicians, and by the medical school must be continued and be expanded through greater public support and legislation. Only by continuous action and continuous study can the health of Alabama's citizens be maintained and improved.

APPENDICES

Appendix 1. General and Infant Mortality Rates in Alabama Counties, 1932 and 1941.

County	General Mortality Rates (per 1,000 persons)		Infant Mortality Rates (per 1,000 live births)	
	1932	1941	1932	1941
UNITED STATES	10.9	10.5	57.6	45.3
ALABAMA	10.2	10.1	60.9	58.7
Autauga	9.0	10.5	55.8	58.8
Baldwin	11.2	10.6	57.6	57.5
Barbour	11.5	10.8	63.7	57.6
Bibb	9.0	11.3	46.3	61.0
Blount	7.2	7.2	47.9	57.0
Bullock	11.8	12.6	68.9	74.3
Butler	11.1	8.7	62.4	51.4
Calhoun	10.1	10.1	73.8	69.3
Chambers	9.0	10.6	57.5	60.8
Cherokee	8.2	8.4	50.9	46.6
Chilton	11.8	9.6	69.4	56.5
Choctaw	7.4	8.8	53.2	27.6
Clarke	10.7	10.6	49.2	77.8
Clay	9.8	8.8	48.0	51.6
Cleburne	8.2	9.3	49.3	103.8
Coffee	6.1	7.2	41.4	36.6
Colbert	9.6	9.2	63.3	56.2
Conecuh	8.4	8.1	48.9	53.0
Coosa	10.0	9.8	53.5	65.3
Covington	7.5	7.6	39.8	43.9
Crenshaw	8.8	9.7	60.8	58.7
Cullman	8.2	6.0	60.9	28.6
Dale	10.3	8.6	65.3	51.2
Dallas	14.4	15.2	84.9	76.4
DeKalb	7.4	7.2	37.8	59.6
Elmore	10.3	10.3	56.8	66.6
Escambia	9.1	9.4	36.2	64.3
Etowah	9.1	9.4	70.0	55.7
Fayette	8.5	8.1	49.4	60.7
Franklin	6.6	6.6	45.2	50.8
Geneva	7.9	7.0	56.1	53.2
Greene	12.9	12.4	83.2	80.3
Hale	11.2	12.3	64.4	86.1
Henry	7.2	8.3	31.3	67.5
Houston	9.1	7.9	71.3	68.0
Jackson	8.8	7.9	59.2	85.8
Jefferson	11.1	11.6	64.6	55.0
Lamar	8.0	7.0	55.4	23.7
Lauderdale	8.2	9.1	57.3	51.2
Lawrence	8.2	7.1	47.0	34.5
Lee	11.5	11.1	62.3	72.8
Limestone	8.5	8.2	54.7	60.2
Lowndes	14.3	13.7	81.9	78.1
Macon	11.9	12.4	63.6	74.0

Appendix 1. General and Infant Mortality Rates in Alabama Counties, 1932 and 1941. (Continued)

County	General Mortality Rates (per 1,000 persons)		Infant Mortality Rates (per 1,000 live births)	
	1932	1941	1932	1941
Madison	11.0	10.1	83.5	64.3
Marengo	10.1	10.5	49.4	60.7
Marion	7.1	5.7	54.4	50.0
Marshall	8.3	6.9	55.6	40.8
Mobile	13.4	12.9	66.8	55.1
Monroe	8.4	8.7	54.7	54.0
Montgomery	12.6	12.4	70.2	60.4
Morgan	10.5	7.8	69.1	49.8
Perry	11.5	11.6	53.8	72.9
Pickens	9.4	8.3	33.6	37.6
Pike	10.2	10.0	61.0	65.4
Randolph	8.5	9.5	70.1	63.2
Russell	11.9	12.1	70.1	63.0
St. Clair	11.2	10.2	81.2	68.3
Shelby	10.2	10.7	55.9	73.9
Sumter	12.5	12.2	64.6	80.2
Talladega	11.6	10.8	59.6	66.3
Tallapoosa	8.7	9.0	59.1	75.5
Tuscaloosa	10.7	9.6	57.9	68.0
Walker	8.5	8.8	58.4	64.2
Washington	8.9	9.8	58.4	58.4
Wilcox	13.7	14.0	76.0	63.0
Winston	7.6	8.0	53.6	61.9

Appendix 2. Death Rates by Selected Causes in the United States and Alabama, 1940.

(Exclusive of stillbirths. By place of occurrence. Rates per 100,000 population.)

International List Number		United States*			Alabama**		
		Total	White	Non-White	Total	White	Non-White
	ALL CAUSES	1076.4	1041.5	1382.8	1042.4	852.0	1400.2
1, 2	Typhoid & Paratyphoid Fever	1.1	0.9	3.2	1.5	1.1	2.2
6	Cerebrospinal Meningitis	0.5	0.5	0.6	0.8	1.1	0.3
8	Scarlet Fever	0.5	0.5	0.3	0.5	0.6	0.2
9	Whooping Cough	2.2	1.8	5.9	4.2	2.8	6.9
10	Diphtheria	1.1	1.0	1.8	2.2	2.5	1.5
13-22	Tuberculosis—All Forms	45.9	36.6	128.0	52.9	31.1	93.9
27	Dysentery	1.9	1.6	4.3	3.0	3.0	3.0
28	Malaria	1.1	0.6	5.6	7.3	4.3	12.8
30	Syphilis—All Forms	14.4	9.9	54.3	20.7	6.3	47.8
35	Measles	0.5	0.5	0.8	1.2	1.3	1.1
45-55	Cancer & Other Malignant Tumors—All Sites	120.3	125.0	78.4	65.3	68.7	59.0
61	Diabetes Mellitus	26.6	27.6	17.9	12.2	12.4	11.7
63-b	Exophthalmic Goiter	2.8	2.9	1.9	1.4	1.5	1.4
69	Pellagra (Except Alcoholic)	1.6	1.1	6.3	8.6	6.5	12.6
77	Alcoholism (Ethylism)	1.9	1.8	2.6	1.2	1.0	1.6
83	Intracranial Lesions of Vascular Origin	90.9	88.6	111.7	84.4	69.6	112.2
90-95	Diseases of Heart	292.5	297.6	248.5	180.2	164.4	210.0
106	Bronchitis	3.0	3.1	2.4	1.9	2.4	1.1
107-9, 33	Pneumonia (All Forms) & Influenza	70.3	64.0	125.4	93.2	77.2	123.2
117	Ulcer of Stomach	6.8	6.8	6.4	5.4	5.8	4.7
119, 120	Diarrhea, Enteritis, Ulceration of Intestines	10.3	9.1	21.1	18.2	17.7	19.3
121	Appendicitis	9.9	9.8	10.4	7.8	7.5	8.4
122	Hernia & Intestinal Obstruction	9.0	8.8	10.9	7.2	6.1	9.1
124	Cirrhosis of Liver	8.6	8.9	5.8	4.1	3.7	4.7
126	Biliary Calculi	3.5	3.8	1.0	1.1	1.5	0.4
130-132	Nephritis—All Forms	81.5	76.6	124.7	95.7	77.3	130.4
137	Diseases of Prostate	6.7	6.7	6.1	4.1	3.1	5.8
140-150	Puerperal Causes	6.7	5.6	16.8	13.6	8.5	23.2
157-161	Congenital Malformations & Diseases Peculiar to First Year of Life	49.2	47.2	66.6	62.1	59.0	67.8
162	Senility	7.7	6.7	16.8	16.9	9.7	30.6
170	Motor-vehicle Accidents	26.2	26.5	23.8	21.3	23.6	17.0
169, 171-195	Other Accidents	47.4	46.7	53.4	45.4	41.4	52.9

*U. S. Bureau of the Census, **Vital Statistics Rates in the United States, 1900-1940.** Table 16.

**Ibid., Table 20.

Appendix 3. Death Rates in Alabama Counties by Selected Causes, 1932 and 1941.
(Rates per 100,000 population. By place of residence.)

County	Diseases of the Heart		Nephritis		Pneumonia		Intracranial Lesions		Cancer		Tuberculosis		Senility	
	1932	1941	1932	1941	1932	1941	1932	1941	1932	1941	1932	1941	1932	1941
UNITED STATES	281.2	290.2	90.0	75.1	99.9	63.8	90.0	89.1	119.3	120.2	59.2	44.5	4.3	7.3
ALABAMA	117.8	176.1	85.3	89.4	66.7	52.6	70.7	82.7	57.3	66.3	76.2	52.3	18.8	14.2
Autauga	80.4	160.8	75.1	104.1	25.0	33.1	85.1	...	25.0	42.6	30.0	18.9	50.0	23.6
Baldwin	167.8	198.0	116.4	100.5	47.9	36.5	68.5	79.2	92.5	79.2	30.8	36.5	34.2	21.3
Barbour	144.6	210.0	120.0	67.0	73.9	39.6	95.4	112.6	70.8	48.7	61.6	51.7	27.7	15.2
Bibb	106.6	188.5	63.0	109.2	38.8	34.7	48.4	99.2	72.7	89.3	48.4	69.5	38.8	19.8
Blount	49.4	121.3	49.4	33.7	56.4	57.3	60.0	101.0	52.9	50.5	49.4	27.0	10.6	3.4
Bullock	115.2	196.9	40.1	101.0	35.0	45.4	65.1	35.3	45.1	50.5	90.1	20.2	85.1	20.2
Butler	123.8	192.5	84.7	39.7	71.6	27.5	74.9	55.0	55.4	91.7	74.9	48.9	39.1	21.4
Calhoun	123.8	186.7	115.1	107.3	69.8	73.2	69.8	65.3	50.6	73.1	94.2	48.2	5.2	3.1
Chambers	110.1	150.6	95.1	136.5	37.5	47.0	62.6	117.6	50.1	56.5	65.1	35.3	35.0	32.9
Cherokee	39.7	145.5	119.1	65.2	49.6	30.1	49.6	55.2	69.5	65.2	34.7	60.2	...	15.0
Chilton	71.0	109.2	63.1	63.4	47.4	59.9	106.6	56.4	75.0	88.1	47.4	17.6	23.7	14.1
Choctaw	97.8	222.8	63.6	69.3	29.4	29.7	24.5	89.1	24.5	59.4	93.0	54.5	48.9	29.7
Clarke	144.0	176.0	56.9	93.4	45.5	32.4	64.4	71.8	56.9	50.3	106.1	25.1	56.9	53.9
Clay	108.1	147.9	74.0	53.2	45.5	53.1	74.0	65.1	74.0	65.1	39.8	35.5	28.4	29.6
Cleburne	53.6	109.3	38.3	51.0	53.6	29.2	61.3	65.6	53.6	65.6	69.0	21.9	46.0	14.6
Coffee	77.1	87.5	21.6	65.6	58.6	72.0	61.7	68.8	46.2	31.3	12.3	28.1	6.2	6.2
Colbert	110.3	176.2	87.6	69.3	55.2	49.1	51.9	72.2	77.9	63.5	113.6	49.1	29.2	5.8
Conecuh	51.1	137.3	102.2	58.8	43.2	43.1	66.8	94.1	39.3	51.0	47.2	35.3	19.6	19.6
Coosa	118.2	235.6	126.1	88.3	55.2	22.1	63.1	66.2	110.4	81.0	55.2	51.5	15.8	29.4
Covington	76.9	124.1	89.0	89.0	62.5	39.8	62.5	63.2	48.1	60.9	9.6	21.1	16.8	...
Crenshaw	84.6	156.6	105.7	110.0	33.8	46.6	76.1	76.2	42.3	46.5	33.8	50.8	12.7	8.5
Cullman	35.3	89.3	89.5	64.4	44.7	29.1	30.6	64.4	49.4	62.3	49.4	37.4	23.5	4.2
Dale	121.4	101.4	86.7	114.6	104.0	96.9	125.7	119.0	52.0	61.7	47.7	13.2	17.3	...
Dallas	205.0	236.2	92.5	176.7	65.3	48.6	99.8	129.8	52.6	70.3	105.2	45.1	27.2	19.8
DeKalb	66.2	117.4	66.2	78.2	76.0	41.4	66.2	64.4	58.9	64.4	49.0	27.6	9.8	6.9
Elmore	75.7	149.3	116.5	92.6	61.2	20.9	75.7	140.4	52.4	68.7	116.5	44.8	20.4	50.8
Escambia	108.5	167.0	87.5	80.2	59.5	66.8	77.0	66.8	49.0	73.5	59.5	30.1	17.5	10.0
Etowah	85.5	158.7	74.8	104.4	73.3	54.2	48.9	57.0	44.3	66.5	90.1	67.8	19.8	13.6
Fayette	93.9	163.2	47.0	45.3	114.8	72.6	41.7	68.0	52.2	49.9	41.7	27.2	10.4	13.6

Appendix 3. Death Rates in Alabama Counties by Selected Causes, 1932 and 1941. (Continued)

(Rates per 100,000 population. By place of residence.)

County	Diseases of the Heart		Nephritis		Pneumonia		Intracranial Lesions		Cancer		Tuberculosis		Senility	
	1932	1941	1932	1941	1932	1941	1932	1941	1932	1941	1932	1941	1932	1941
Franklin	100.5	115.0	42.5	32.3	42.5	50.4	65.7	35.9	38.7	53.9	50.3	28.8	7.7	7.2
Geneva	70.2	89.1	16.7	92.6	66.9	37.6	73.6	54.8	36.8	48.0	56.9	17.1	3.3	3.4
Greene	127.4	198.1	86.6	83.4	56.1	41.6	61.2	52.1	81.6	73.0	107.0	41.7	30.6	36.5
Hale	111.1	152.7	72.8	156.7	38.3	66.6	65.1	109.7	30.6	39.2	76.6	39.2	57.5	50.9
Henry	75.2	86.7	22.1	95.8	61.9	31.9	57.5	100.4	35.4	54.8	22.1	31.9	22.1	9.1
Houston	117.7	135.8	54.5	85.4	85.0	39.3	78.5	54.7	30.5	52.6	34.9	43.8	10.9	8.8
Jackson	60.5	101.4	39.5	35.4	55.3	63.7	63.2	44.8	42.1	56.6	52.6	54.2	10.5	4.7
Jefferson	126.7	218.8	97.3	78.8	85.4	62.1	71.9	105.3	63.2	88.0	103.0	79.4	38.8	7.1
Lamar	87.0	125.5	76.1	80.3	59.8	45.1	70.7	80.3	59.8	35.1	76.1	45.2	10.9	5.0
Lauderdale	106.4	140.8	73.3	70.4	47.3	72.5	44.9	61.9	59.1	57.6	78.0	72.5	9.5	8.5
Lawrence	95.8	110.7	22.1	39.3	44.2	35.7	47.9	21.4	55.2	46.4	99.4	46.4	7.4	10.7
Lee	136.3	145.0	130.0	142.3	47.5	51.0	82.4	80.5	72.9	72.5	57.0	29.5	34.9	13.4
Limestone	87.9	92.6	63.2	44.9	46.7	47.7	76.9	58.9	19.2	39.3	107.1	64.5	19.2	11.2
Lowndes	157.7	141.2	109.5	48.5	61.3	48.5	105.1	119.1	61.3	26.5	113.9	75.0	39.4	26.5
Macon	143.2	178.9	113.8	102.8	55.1	38.0	84.5	95.2	47.7	60.9	77.1	41.9	22.0	34.2
Madison	92.3	163.8	53.8	79.7	60.0	40.5	73.8	57.1	47.7	57.1	120.0	99.2	15.4	4.5
Marengo	104.8	181.9	71.7	86.7	22.0	56.0	68.9	86.7	44.1	64.4	80.0	25.2	38.6	39.2
Marion	52.6	75.5	41.4	61.8	37.6	48.1	26.3	24.0	45.1	30.9	67.7	24.0	15.0	10.3
Marshall	64.4	107.7	96.6	91.3	71.8	44.4	47.0	37.4	49.5	77.2	76.8	32.8	17.3	7.0
Mobile	237.7	304.4	224.0	171.7	93.8	65.6	88.1	83.8	83.3	83.8	66.3	62.8	9.7	7.7
Monroe	60.1	125.6	90.2	84.8	43.4	47.6	43.4	74.7	50.1	47.5	43.4	23.8	10.0	13.6
Montgomery	185.9	271.8	94.9	78.3	86.1	67.7	97.8	146.9	83.2	68.6	73.4	73.0	20.5	10.6
Morgan	109.4	159.1	81.5	72.3	72.9	57.9	72.9	55.8	68.6	47.5	107.2	28.9	12.9	10.3
Perry	128.6	127.6	45.4	108.9	56.7	63.8	102.1	101.4	30.3	41.3	90.8	48.8	56.7	56.3
Pickens	125.4	157.0	50.9	67.8	43.1	39.3	66.6	50.0	82.3	85.7	86.2	39.3	62.7	17.8
Pike	161.0	193.7	92.9	67.6	65.0	24.6	114.6	113.8	46.4	43.0	52.6	12.3	9.3	15.4
Randolph	75.3	129.3	97.9	129.3	64.0	47.0	37.6	117.6	45.2	47.0	7.5	11.8	26.4	23.5
Russell	127.0	199.5	76.8	116.4	82.7	94.2	115.1	108.1	47.2	66.5	109.2	61.0	23.6	47.1
St. Clair	111.3	231.1	43.7	79.4	103.4	46.9	63.6	61.4	71.6	61.4	91.5	68.6	11.9	7.2
Shelby	107.6	199.1	57.4	85.8	96.8	58.3	25.1	44.6	71.7	85.8	57.4	78.9	25.1	3.4
Sumter	107.3	98.6	74.0	116.9	66.6	62.1	62.9	80.4	51.8	84.0	103.6	65.8	70.3	47.5
Talladega	94.2	155.7	74.9	87.4	119.8	38.0	70.6	72.2	85.6	68.4	94.2	77.9	25.7	17.1
Tallapoosa	124.6	128.6	121.5	136.9	31.1	36.4	49.8	61.5	65.4	75.5	46.7	41.9	18.7	22.4
Tuscaloosa	175.1	234.9	52.4	79.2	70.3	54.3	73.3	82.0	56.9	63.9	73.3	45.9	9.0	7.0
Walker	110.7	165.1	18.2	54.0	62.8	67.9	56.2	69.4	46.3	71.0	67.8	44.8	3.3	4.6
Washington	79.6	142.1	73.5	111.2	24.5	24.7	61.2	55.6	67.4	68.0	49.0	24.7	30.6	24.7
Wilcox	146.8	177.7	87.3	215.5	43.6	37.8	107.2	124.7	31.8	60.5	131.0	56.7	11.9	41.6
Winston	98.1	114.9	30.7	57.5	61.3	67.9	73.6	26.1	36.8	62.7	42.9	41.8	36.8	10.4

Appendix 4. Physicians in Alabama Counties, 1944.

County	Population Nov. 1943	Physicians Nov. 1944		Persons Per Physician
		Total	Active	
ALABAMA	2,718,273	1,553	1,395	1,948
Autauga	16,514	7	6	2,752
Baldwin	35,387	16	13	2,722
Barbour	27,600	12	10	2,760
Bibb	17,036	11	10	1,703
Blount	23,944	14	11	2,176
Bullock	17,423	6	5	3,484
Butler	26,533	11	8	3,316
Calhoun	70,610	36	35	2,017
Chambers	37,777	15	11	3,434
Cherokee	15,891	5	4	3,972
Chilton	22,435	11	10	2,243
Choctaw	16,874	8	7	2,410
Clarke	23,354	14	11	2,123
Clay	13,818	10	8	1,727
Cleburne	11,143	3	2	5,571
Coffee	29,700	14	13	2,284
Colbert	35,493	15	13	2,730
Conecuh	19,967	8	7	2,853
Coosa	11,149	3	2	5,574
Covington	35,341	19	17	2,078
Crenshaw	18,955	8	6	3,159
Cullman	40,804	20	16	2,550
Dale	23,243	11	10	2,324
Dallas	50,896	37	32	1,590
DeKalb	36,490	20	19	1,920
Elmore	29,920	10	9	3,324
Escambia	28,264	11	11	2,569
Etowah	77,085	54	51	1,511
Fayette	17,090	9	7	2,441
Franklin	23,536	13	11	2,139
Geneva	24,899	15	15	1,659
Greene	15,812	8	4	3,953
Hale	21,348	7	5	4,269
Henry	17,758	8	7	2,536
Houston	41,611	28	24	1,733
Jackson	35,529	12	10	3,552
Jefferson	470,383	402	378	1,244
Lamar	15,703	11	10	1,570
Lauderdale	45,614	27	25	1,824
Lawrence	24,751	8	8	3,093
Lee	32,878	16	15	2,191
Limestone	31,679	10	10	3,167
Lowndes	18,220	7	6	3,036
Macon	26,815	12	8	3,351
Madison	67,530	30	28	2,411
Marengo	27,259	14	14	1,947

Appendix 4. Physicians in Alabama Counties, 1944—(Continued)

County	Population Nov. 1943	Physicians Nov. 1944		Persons Per Physician
		Total	Active	
Marion	22,316	15	11	2,028
Marshall	38,498	19	15	2,566
Mobile	227,763	117	107	2,128
Monroe	23,355	10	10	2,335
Montgomery	115,246	82	79	1,458
Morgan	45,576	26	25	1,823
Perry	20,722	9	8	2,590
Pickens	23,681	12	11	2,152
Pike	27,775	15	14	1,984
Randolph	21,818	12	11	1,983
Russell	38,695	9	8	4,836
Shelby	26,765	15	13	2,058
St. Clair	24,294	12	12	2,024
Sumter	22,377	17	14	1,598
Talladega	59,436	34	30	1,981
Tallapoosa	30,759	13	12	2,563
Tuscaloosa	67,977	44	29	2,344
Walker	57,507	27	26	2,211
Washington	13,347	2	2	6,673
Wilcox	22,833	10	9	2,536
Winston	15,471	7	7	2,210

Appendix 5. Hospital Beds in Alabama Counties, 1944

County	City	Hospital	Hospital Beds (Mar. 1945)		County Population (Nov. 1943)	Beds Per 1000 Population
		ALABAMA	5,633		2,718,273	2.07
Autauga	Prattville	Prattville General Hospital	20		16,514	1.21
Baldwin					35,387	
Barbour	Eufaula	Salter Hospital	52		27,600	1.88
Bibb					17,036	
Blount					23,944	
Bullock					17,423	
Butler	Greenville	Stabler Infirmary	40			
	Greenville	Speir Hospital	46			
		(County Total)		(86)	26,533	3.24
Calhoun	Anniston	Anniston Memorial Hospital	105		70,610	1.49
Chambers	Langdale	Langdale Hospital	25			
	LaFayette	Wheeler Hospital	24			
		(County Total)		(49)	37,777	1.30
Cherokee					15,891	
Chilton	Clanton	Central Alabama Hospital	22		22,435	0.98
Choctaw					16,874	
Clarke	Jackson	South Alabama Infirmary, Inc.	16		23,354	0.69
Clay					13,818	
Cleburne					11,143	
Coffee	Enterprise	Gibson Hospital	45		29,700	1.52
Colbert	Sheffield	Colbert County Hospital	63		35,493	1.77
Conecuh	Repton	Carter's Hospital	16		19,967	0.80
Coosa					11,149	
Covington	Andalusia	Hillcrest Hospital	50			
	Andalusia	Memorial Hospital	25			
	Florala	Lakeview Hospital	30			
		(County Total)		(105)	35,341	2.97
Crenshaw					18,955	

Appendix 5. Hospital Beds in Alabama Counties, 1944—(Continued)

County	City	Hospital	Hospital Beds (Mar. 1945)		County Population (Nov. 1943)	Beds Per 1000 Population
Cullman	Cullman	Cullman Hospital	50		40,804	1.23
Dale					23,243	
Dallas	Selma	Burwell Infirmary	30			
	Selma	Goldsby King Memorial Hospital	65			
	Selma	Selma Baptist Hospital	67			
	Selma	Vaughan Memorial Hospital	35			
		(County Total)		(197)	50,896	3.87
DeKalb					36,490	
Elmore	Wetumpka	Wetumpka General Hospital	35		29,920	1.17
Escambia	Atmore	Atmore General Hospital	22			
	Brewton	Escambia Hospital	24			
		(County Total)		(46)	28,265	1.63
Etowah	Altoona	Klein Hospital	27			
	Gadsden	Baptist Memorial	32			
	Gadsden	Holy Name of Jesus Hospital	106			
		(County Total)		(165)	77,085	2.14
Fayette	Fayette	McNease & Robertson Hospital	20		17,090	1.17
Franklin	Russellville	Russellville Hospital	32		23,536	1.36
Geneva	Hartford	Tippins Hospital	20		24,899	0.80
Greene					15,812	
Hale	Greensboro	Greensboro Hospital	18		21,348	0.84
Henry					17,758	
Houston	Dothan	M. S. Davie Hospital	50			
	Dothan	Frasier Ellis Hospital	65			
	Dothan	Moody Hospital	70			
		(County Total)		(185)	41,611	4.45
Jackson	Scottsboro	Hodges Hospital	20		35,529	0.56
Jefferson	Bessemer	Bessemer General Hospital	72			
	Birmingham	Baptist Hospital	195			
	Birmingham	Children's Hospital	50			

Appendix 5. Hospital Beds in Alabama Counties, 1944—(Continued)

County	City	Hospital	Hospital Beds (Mar. 1945)		County Population (Nov. 1943)	Beds Per 1000 Population
	Birmingham	Hillman Hospital	440			
	Birmingham	Hargis Hospital	25			
	Birmingham	Jefferson Hospital	545			
	Birmingham	Slossfield Maternity Hospital	12			
	Birmingham	McLester's Hospital	16			
	Birmingham	Norwood Hospital	228			
	Birmingham	St. Vincent's Hospital	135			
	Birmingham	South Highlands Infirmary	140			
	Fairfield	Tennessee Company's Hospital	273			
		(County Total)		(2131)	470,383	4.53
Lamar					15,703	
Lauderdale	Florence	Eliza Coffee Memorial Hospital	75		45,614	1.64
Lawrence	Moulton	Irwin & Dyar Infirmary	15		24,751	0.61
Lee	Opelika	Opelika Infirmary	25			
	Auburn	John Hodges Drake	62			
		(County Total)		(87)	32,878	2.65
Limestone	Athens	Powers Hospital	25			
	Athens	Limestone County Hospital	10			
		(County Total)		(35)	31,679	1.10
Lowndes					18,220	
Macon	Tuskegee	John A. Andrews Memorial Hospital	134		26,815	5.00
Madison	Huntsville	Huntsville Hospital	76		67,530	1.13
Marengo	Demopolis	Demopolis Hospital	25		27,259	0.92
Marion					22,316	
Marshall	Albertville	Sand Mountain Infirmary	24			
	Guntersville	Guntersville City Hospital	25			
		(County Total)		(49)	38,498	1.27
Mobile	Mobile	Allen Memorial Home (Maternity)	25			
	Mobile	City Hospital	265			
	Mobile	Mobile Infirmary	150			

Appendix 5. Hospital Beds in Alabama Counties, 1944—(Continued)

County	City	Hospital	Hospital Beds (Mar. 1945)		County Population (Nov. 1943)	Beds Per 1000 Population
	Mobile	Providence Infirmary	117			
		(County Total)		(557)	227,763	2.45
Monroe					23,355	
Montgomery	Montgomery	Fitts Hill Hospital	30			
	Montgomery	Fraternal Hospital	50			
	Montgomery	Hale Infirmary	30			
	Montgomery	Hubbard's Hospital	32			
	Montgomery	St. Margaret's Hospital	138			
		(County Total)		(280)	115,246	2.43
Morgan	Decatur	Bough Infirmary Inc.	48			
	Decatur	Decatur General Hospital	40			
		(County Total)		(88)	45,576	1.93
Perry					20,722	
Pickens					23,681	
Pike	Troy	Beard Memorial Hospital	35			
	Troy	Edge Hospital	35			
		(County Total)		(70)	27,775	2.52
Randolph	Roanoke	Knight Sanitorium	50		21,818	2.29
Russell					38,695	
Shelby					26,765	
St. Clair	Pell City	Pell City Infirmary	38		24,294	1.56
Sumter	Bellamy	Bellamy Hospital	16			
	York	Hill Hospital	20			
		(County Total)		(36)	22,377	1.61
Talladega	Talladega	Citizen's Hospital	100			
	Sylacauga	Drummond Fraser Hospital	36			
	Sylacauga	Sylacauga City Hospital	87			
		(County Total)		(223)	59,436	3.75

Appendix 5. Hospital Beds in Alabama Counties, 1944—(Continued)

County	City	Hospital	Hospital Beds (Mar. 1945)		County Population (Nov. 1943)	Beds Per 1000 Population
Tallapoosa	East Tallassee	Community Hospital	29			
	Alexander City	Russell Hospital	54			
		(County Total)		(83)	30,759	2.70
Tuscaloosa	Tuscaloosa	Druid City Hospital	74			
	Tuscaloosa	Emily Estes Snedecor Hospital	45			
		(County Total)		(119)	67,977	1.75
Walker	Jasper	People's Hospital	45			
	Jasper	Walker County Hospital	50			
		(County Total)		(95)	57,507	1.65
Washington			-----		13,347	-----
Wilcox			-----		22,833	-----
Winston			-----		15,471	-----

Appendix 6. Chronically Ill Persons Known to be In Need of Public Institutional Care but not Receiving Such Care, September, 1944.

County	Total Persons	Aged*	Others
ALABAMA	3,241	2,015	1,226
Autauga	0	0	0
Baldwin	12	5	7
Barbour	40	19	21
Bibb	23	14	9
Blount	1	0	1
Bullock	26	17	9
Butler	59	38	21
Calhoun	36	12	24
Chambers	13	4	9
Cherokee	13	8	5
Chilton	8	6	2
Choctaw	16	11	5
Clarke	60	26	34
Clay	8	4	4
Cleburne	69	58	11
Coffee	43	22	21
Colbert	64	46	18
Conecuh	140	87	53
Coosa	25	14	11
Covington	22	6	16
Crenshaw	12	10	2
Cullman	52	37	15
Dale	9	4	5
Dallas	74	52	22
DeKalb	29	16	13
Elmore	15	8	7
Escambia	25	21	4
Etowah	100	68	32
Fayette	2	2	0
Franklin	145	86	59
Geneva	8	5	3
Greene	43	35	8
Hale	6	6	0
Henry	20	10	10
Houston	67	48	19
Jackson	41	32	9
Jefferson	347	111	236
Lamar	59	32	27
Lauderdale	203	134	69
Lawrence	56	44	12
Lee	46	38	8
Limestone	8	6	2
Lowndes	3	3	0
Macon	25	16	9
Madison	94	73	21
Marengo	48	32	16

Appendix 6. Chronically Ill Persons Known to be In Need of Public Institutional Care but not Receiving Such Care, September, 1944—(Continued)

County	Total Persons	Aged*	Others
Marion	12	7	5
Marshall	59	50	9
Mobile	165	70	95
Monroe	87	61	26
Montgomery	91	62	29
Morgan	26	18	8
Perry	77	54	23
Pickens	32	25	7
Pike	35	27	8
Randolph	0	0	0
Russell	8	5	3
St. Clair	31	25	6
Shelby	16	15	1
Sumter	72	47	25
Talladega	52	24	28
Tallapoosa	36	21	15
Tuscaloosa	64	51	13
Walker	103	74	29
Washington	8	6	2
Wilcox	17	17	0
Winston	35	30	5

*Persons 65 years of age and over.

Appendix 7. Effective Buying Income Available Physicians in Alabama Counties, 1940.

County	Population 1940	Physicians 1940	Persons Per Physician	Buying Income in Thousands	Per Capita Buying Income
U. S.	131,669,275	175,163	752	$74,182,005	$ 563
ALABAMA	2,832,961	1,878	1,508	682,202	241
Autauga	20,977	9	2,331	2,399	114
Baldwin	32,324	15	2,155	6,700	207
Barbour	32,722	17	1,925	4,219	129
Bibb	20,155	14	1,440	2,592	129
Blount	29,490	14	2,106	2,901	98
Bullock	19,810	8	2,476	2,164	109
Butler	32,447	13	2,496	4,537	140
Calhoun	63,319	46	1,377	18,545	293
Chambers	42,146	18	2,341	4,788	114
Cherokee	19,928	6	3,321	2,153	108
Chilton	27,955	17	1,644	4,086	146
Choctaw	20,195	10	2,020	1,771	88
Clarke	27,636	18	1,535	4,794	173
Clay	16,907	9	1,879	1,886	112
Cleburne	13,629	3	4,543	1,793	132
Coffee	31,987	16	1,999	4,199	131
Colbert	34,093	20	1,705	7,508	220
Conecuh	25,489	10	2,549	2,581	101
Coosa	13,460	4	3,365	1,012	75
Covington	42,417	19	2,232	8,704	205
Crenshaw	23,631	9	2,626	2,915	123
Cullman	47,343	21	2,254	7,530	159
Dale	22,685	15	1,512	2,575	114
Dallas	55,245	40	1,381	15,671	284
DeKalb	43,075	20	2,154	4,938	115
Elmore	34,546	18	1,919	4,633	134
Escambia	30,671	20	1,534	6,191	202
Etowah	72,580	56	1,296	20,442	282
Fayette	21,651	10	2,165	3,316	153
Franklin	27,552	16	1,722	3,736	136
Geneva	29,172	19	1,535	3,659	125
Greene	19,185	10	1,919	2,103	110
Hale	25,533	14	1,824	2,390	94
Henry	21,912	11	1,992	2,649	121
Houston	45,665	34	1,343	10,690	234
Jackson	41,802	18	2,322	4,684	112
Jefferson	459,930	475	968	210,794	458
Lamar	19,708	14	1,408	2,566	130
Lauderdale	46,230	30	1,541	16,858	365
Lawrence	27,880	9	3,098	2,320	83
Lee	36,455	23	1,585	7,602	209
Limestone	35,642	17	2,097	4,348	122
Lowndes	22,661	7	3,237	2,564	113

Appendix 7. Effective Buying Income Available Physicians in Alabama Counties, 1940. (Continued)

County	Population 1940	Physicians 1940	Persons Per Physician	Buying Income in Thousands	Per Capita Buying Income
Macon	27,654	17	1,627	$ 4,087	$ 148
Madison	66,317	34	1,951	17,469	263
Marengo	35,736	20	1,787	4,467	125
Marion	28,776	19	1,515	3,124	109
Marshall	42,395	26	1,631	8,095	191
Mobile	141,974	116	1,224	63,320	446
Monroe	29,465	14	2,105	3,435	117
Montgomery	114,420	112	1,022	54,451	476
Morgan	48,148	31	1,553	10,044	209
Perry	26,610	12	2,218	2,840	107
Pickens	27,671	15	1,845	2,552	92
Pike	32,493	20	1,625	6,524	201
Randolph	25,516	16	1,595	3,084	121
Russell	35,775	10	3,578	4,277	120
St. Clair	27,336	17	1,608	4,088	150
Shelby	28,962	16	1,810	4,111	142
Sumter	27,321	18	1,518	2,899	106
Talladega	51,832	26	1,994	8,384	162
Tallapoosa	35,270	16	2,204	5,353	152
Tuscaloosa	76,036	59	1,289	19,649	258
Walker	64,201	37	1,735	9,998	156
Washington	16,188	6	2,698	788	49
Wilcox	26,279	13	2,021	2,849	108
Winston	18,746	11	1,704	1,808	96

Appendix 8. Hospital Legislation Enacted by the 1945 Alabama Legislature.

No. 211 S. 107—Simpson

AN ACT

To authorize the State Board of Health to construct, equip, maintain, and operate public hospitals and health centers and related facilities for the treatment of any type of disease; to authorize the State Board of Health to set up a master plan of hospitals; to authorize the appointment of an advisory council to approve policies relating to hospitals; to designate the State Board of Health as the sole and official agency of the State of Alabama to receive and administer any and all funds appropriated by the United States or by the State of Alabama, and to receive and administer any and all gifts or donations in general from any individual or agency for the purpose of acquiring, constructing, maintaining, equipping, and operating public and non-profit hospitals and health centers; to authorize the State Board of Health to establish rules and regulations and to provide for licensing of all the hospitals in Alabama (except the Alabama State Hospitals, Partlow State School for Mental Deficients, tuberculosis hospitals, and hospitals operated by the federal government), whether private, non-profit, or public; to authorize the State Board of Health to establish and support such internal administrative divisions or bureaus as may be necessary to fulfill the responsibilities set forth; to authorize the State Board of Health to obtain or dispose of property; to authorize any one or more local governing bodies to establish hospital associations and to enter into contracts with the State Board of Health for the purpose of acquiring, constructing, equipping, maintaining, and operating hospitals or health centers; to authorize hospital associations to do all things necessary to carry out the powers set forth in this Act; to authorize the State Board of Health to cooperate in the acquiring, building, equipping, maintaining, and operation of any public hospitals and health centers and related facilities for the treatment of any type of disease; to authorize the State Board of Health to enter into contracts with any agency for the purpose of carrying into effect the above; to authorize local governing bodies to appropriate monies for the support of these hospitals; to provide funds to enable the State Board of Health to administer the program as provided in this Act; to repeal any existing ordinances or statutes in conflict with the provisions of this Act.

BE IT ENACTED BY THE LEGISLATURE OF ALABAMA:

Section 1. The following terms used in this Act shall have the meaning as defined herein unless a different meaning clearly appears from the context. **State Board of Health** shall mean the statutory agency of the State of Alabama operative in the field of general health matters and performing the duties and exercising the powers as set forth in the statutory provisions relating thereto. **Master hospital plan** shall refer to a plan, determined upon by the State Board of Health and approved by an advisory council, which shall subdivide the State into regions, districts, and zones and any further divisions which may be necessary for the purpose of establishing an integrated and interrelated system of hospitals and related facilities which will insure the provisions of readily accessible hospital care in all parts of the State. The term **hospital** includes public health centers and general, tuberculosis, mental, chronic disease, and other types of hospitals, and related facilities, such as laboratories, out-patient departments, nurses' homes and training facilities, and central service facilities operated in connection with hospitals.

Title I. **Hospital Construction and Regulation**

Section 2. The State Board of Health is hereby authorized and empowered to acquire, construct, equip, maintain, and operate public hospitals, health centers, and related facilities for the treatment of any type of disease. The State Board of Health is authorized and empowered to cooperate and to make contract with the United States Government, any local political subdivision or their agencies, any non-profit association or public improvement society in the acquisition, building, equipping, maintaining, and operation of any public hospitals, health centers, and related facilities for the treatment of any type of disease.

Section 3. The State Board of Health is hereby authorized and required to set up a master hospital plan which shall divide the State of Alabama into regions, districts, and zones, and to define the territorial areas and boundaries of such regions, districts, and zones. The areas may be revised from time to time as conditions change.

Section 4. There shall be established an advisory council which shall approve the policies and regulations necessary for carrying out the purposes of this Act. The membership of this advisory council shall consist of three (3) hospital administrators or persons with broad experience in hospital administration to be appointed by the Alabama

Hospital Association or by the Governor in the event said association fails or ceases to function; one (1) member of the State Board of Censors to be appointed by that Board; four (4) lay members with broad civic interests representing the varied segments of the population to be appointed by the Governor; the State Health Officer; the State Director of Public Welfare; the Director of the State Planning Board; the Director of Finance; and the Attorney General. The Alabama Hospital Association shall appoint one (1) member for three (3) years; one (1) member for two (2) years; and one (1) member for one (1) year. Thereafter as vacancies in any of these appointments occur the Alabama Hospital Association shall designate a person to fill this vacancy. The Governor shall appoint two (2) of the lay members for a period of three (3) years and two (2) lay members for a period of two (2) years, and shall thereafter fill any vacancies as terms expire. After the expiration of the first appointments all terms shall be three (3) years. The State Health Officer shall act as chairman of the advisory council. The advisory council shall meet at the call of the chairman or at the written request to the chairman by any five members. All members shall be paid all expenses incurred in carrying out the functions and duties of the advisory council, and all members except those employed by the State of Alabama shall be paid fifteen dollars ($15.00) per day for each day they are engaged in the performance of their duties.

Section 5. The State Board of Health is (a) hereby designated as the sole and official agency of the State of Alabama to receive and administer any and all funds for the purpose of constructing, equipping, maintaining, and operating public hospitals, health centers, and related facilities appropriated by the United States Government or the State of Alabama, and it may receive and administer any and all gifts or donations in general from any individual or agency for the purpose of constructing, equipping, maintaining, and operating such facilities; (b) hereby authorized to enter into contracts with any agency for the purpose of carrying the above into effect.

Section 6. The State Board of Health is hereby authorized and empowered to establish rules and regulations which shall provide standards for the construction and operation of hospitals established under this Act, and shall provide for the annual licensing and license renewals of all such hospitals so established.

Section 7. The State Board of Health is hereby authorized and empowered to establish and support such internal divisions or bureaus as may be needed for the purpose of meeting the responsibilities and duties set forth in this Act.

Section 8. The State Board of Health is hereby authorized and empowered to purchase or lease land or acquire property by eminent domain; to purchase, lease, rent, or acquire any building or property needed for the purpose of carrying out a hospital construction and operation program; is further authorized to sell, exchange, or otherwise transfer property, land, buildings, and equipment in order to carry out the compehensive hospital and health center construction program; and is further authorized to do all things necessary to carry out the powers given in this Act.

Title II. **Hospital Associations**

Section 9. Any one or more local governing bodies located in the same or contiguous counties within a zone determined by the State Board of Health as a zone for public hospitals may act to establish a hospital association, a body corporate and politic. Before taking action to establish a hospital association, each local governing body involved shall give notice of the time, place, and purpose of a public hearing at which all residents and tax payers of the local political subdivision shall be given an opportunity to be heard. Such notice by the local governing body shall be given by publishing or posting a notice at least ten days preceding the day on which the hearing is to be held. In determining whether a hospital association shall be established, the need for additional hospital beds in the areas affected shall be determined. After such a hearing, the local governing body shall determine whether to establish a hospital association and if it is decided to establish a hospital association an appropriate resolution or ordinance shall be passed which resolution or ordinance shall take effect immediately and shall not be laid over or published or posted. After the adoption of such resolution or ordinance, the local governing body shall thereupon appoint one member for each precinct or ward falling within the jurisdiction of the local governing body to act as a director for the hospital association. Said hospital association shall be a public body and a body corporate and politic upon the completion of the taking of the following proceedings: The directors of the hospitals association shall present to the Secretary of State an application signed by them which shall set forth that notice has been given and a public hearing has been held and that they have been appointed by a local governing body as

members of a board of directors of a hospital association, the name and official residence of each of the directors together with a certified copy of the appointment evidencing their right to office, the date and place and induction into and taking oath of office and that they desire the hospital association to become a public body and body corporate and politic, the term of office of each of the directors and the place where the official appointment of each of said directors is kept a record, and the name which is proposed for the corporation. The application shall be subscribed and sworn to by each of the directors before an officer authorized by the laws of the State of Alabama to take and certify oaths who shall certify upon the application that he personally knows the directors and knows them to be the officers as asserted in the application and that each subscribed and swore thereto in the officer's presence. The Secretary of State shall examine the application and if he finds that the name proposed for the corporation is not identical with that of a person or of any other corporation of the State or so nearly similar as to lead to confusion and uncertainty he shall receive and file it and shall record it in an appropriate book of records in his office. When the application has been made, filed, and recorded as herein provided, the association shall constitute a public body and a body corporate and politic under the name proposed in the application. The Secretary of State shall make and issue to the said directors a certificate of incorporation pursuant to this chapter under the seal of the State and shall record the same with the application.

Section 10. A hospital association shall consist of the directors appointed by the local governing bodies and the directors shall elect from among their number the first chairman. The term of office of each director shall be five (5) years. A director shall hold office until his successor has been appointed and qualified. Vacancies shall be filled for any unexpired term by the local governing body having the original appointment. A majority of the members shall constitute a quorum. The respective local governing bodies shall appoint or reappoint any director whose term expires or whenever a position becomes vacant for any other reason and shall record a certificate of such appointment or reappointment. A director shall receive no compensation for his services. If at any time a local governing unit shall cease to give financial support to the hospital association as required by the rules and regulations such governing body shall lose all seats on the board of directors.

Section 11. The directors shall meet annually and shall adopt a constitution and by-laws of the corporation, said constitution and by-laws to be subject to the approval of the State Board of Health. The active affairs of the corporation shall be vested in an executive committee composed of not less than five (5) nor more than nine (9) directors to be selected by the directors. The executive committee shall meet monthly, organize itself, and shall carry on the affairs of the corporation in compliance with the laws of the State of Alabama and with the constitution and by-laws of the corporation. The executive committee shall appoint a medical advisory committee of three to five (3 to 5) members from the medical staffs of the respective hospitals. This medical advisory committee will be responsible to the executive committee for the professional aspects of the hospital's operations subject to the rules and regulations adopted by the State Board of Health.

Section 12. Any district or regional hospital association is hereby authorized and empowered to exercise the following powers in addition to others herein granted: (a) to cooperate with the State Board of Health for the purpose of constructing, equipping, maintaining, and operating a hospital by making appropriate application to the State Board of Health; to enter into a cooperative contract with the State Board of Health for this purpose; (b) to act as an agent for the State Board of Health under the cooperative contract to prepare, carry out, and operate hospital projects; to provide for the construction, reconstruction; improvement, alteration, or repair of any hospital or any part thereof; to take over by purchase, lease or otherwise, any hospital; to manage as agent of the State Board of Health any hospital constructed or owned by the association; to arrange with any appropriate local or state agencies for the opening or closing of streets, roadways, alleys, or other transportation facilities; to lease or rent any land, building, structure, or facility needed in the operation of the hospital; to enter upon buildings or property in order to conduct investigations or to make surveys or soundings; to purchase, obtain options upon, acquire by eminent domain, gift, grant, bequest, devise, or otherwise, any property, real or personal, or interest therein from any person, firm, corporation, city, county or government; to sell, exchange, transfer, assign, or pledge any property, real or personal, or any interest therein to any person, firm, corporation, city, county or government; to own, hold, clear and improve property; to insure or provide for insurance of the property or operations of the association against such risks as the association may deem advisable; to borrow money upon its bonds, notes, warrants, debentures, or other evidences of indebtedness and to secure the same by

pledges of its revenues; to have perpetual succession; to make and execute contracts and other instruments necessary or convenient to the exercise of the powers of the association; to make and from time to time amend and repeal by-laws, rules and regulations not inconsistent with this Act, to carry into effect the powers and purposes of the association; to do all things necessary to carry out the powers given in this Act.

Section 13. The governing bodies of each local political subdivision involved are hereby authorized to appropriate their respective shares of the cost of constructing, maintaining, equipping, and operating such hospitals as determined upon by agreement between the executive committee of the association and the State Board of Health. The sums so appropriated shall be paid into the treasury of the corporation and shall be paid out on certificate of the executive committee of the corporation.

Section 14. There is hereby appropriated the sum of fifteen thousand dollars ($15,000) for each of the fiscal years ending September 30, 1946 and September 30, 1947, for administration, engineering, architectural, or other services and functions necessary for carrying out the provisions of this Act. It is further provided that for purposes of construction funds may be allotted by the State Building Commission.

Section 15. Nothing in this Act shall be construed to mean that all local, regional, or district hospitals included in this Act are to be under the direction or control of any body other than the local Executive Committee of each hospital, subject to the rules and regulations contained herein; or to mean that any local executive committee cannot receive and administer gifts, donations, or endowments for their respective local hospitals, subject to the rules and regulations contained herein.

Section 16. All laws or provisions of law in conflict herewith are repealed insofar as they may be inconsistent with the provisions of this Act.

Section 17. If any provision of this Act or the application thereof is held invalid, such invalidity shall not affect the other provisions or applications of this Act.

Section 18. This Act shall be and become effective upon its approval by the Governor or upon its otherwise becoming a law.

Approved July 7, 1945.